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EMPLOYMENT-UNEMPLOYMENT

HEARINGS

BEFORE THE

JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

ONE HUNDRED FIRST CONGRESS

SECOND SESSION

PART 37

FEBRUARY 2, MARCH 9, AND MAY 4, 1990

[Hearing day of April 6, 1990, was not held]

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EMPLOYMENT-UNEMPLOYMENT

FRIDAY, FEBRUARY 2, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room SD-106, Dirksen Senate Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representative Hamilton and Senator Sarbanes.

Also present: William Buechner, Judith Davison, and Chris Frenze, professional staff members.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

This morning, the Joint Economic Committee is very pleased to welcome Commissioner Janet Norwood and her associates from the Bureau of Labor Statistics. Mrs. Norwood is here to testify on the employment and unemployment situation for January 1990.

Before asking Commissioner Norwood to present her testimony, the Joint Economic Committee would like to recognize that Commissioner Norwood was among the 10 top government executives of agencies chosen recently by the Office of Personnel Management for its Profiles in Excellence Award. The purpose of the Profiles in Excellence Award is to identify, document, and disseminate information on outstanding leadership and organizational practices, and provide role models for those facing similar challenges.

Commissioner Norwood was chosen for her ability to maintain a highly professional institution, effectively establishing a Federal-State partnership to provide the Nation with timely and reliable economic data essential for making a wide range of decisions which affect our everyday lives.

Commissioner Norwood certainly deserves this praise. But it should not be considered evidence that Federal statistical agencies can do more with less, or can carry out their responsibilities with a lack of resources.

A recent study for the Joint Economic Committee, by Professors Levitan and Gallo of George Washington University, and earlier hearings by the committee, indicate that the budget cuts of the 1980's did hurt the Federal statistical agencies, not by reducing the quality of the statistics that they currently collect and publish, but by impairing their ability to modernize their statistics, to innovate, and to anticipate changing data needs.

So Commissioner Norwood is a worthy recipient, but the BLS also needs resources to do the job right.

The committee will now hear from Commissioner Norwood for her analysis of the employment and unemployment figures for January 1990.

Welcome again.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS; AND KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS

Mrs. NORWOOD. Thank you, Mr. Chairman.

As usual, I have Mr. Dalton on my right and Mr. Plewes on my left, to assist in any questions you might have. We are always very pleased to be here.

The labor market continued along its recent path of slow, consistent job growth and stable unemployment in January. The overall jobless rate including the Armed Forces, at 5.2 percent, and the civilian unemployment rate, at 5.3 percent, were both about where they had been for nearly a year and a half. Payroll employment rose by 275,000, but that figure may be somewhat overstated. Job growth averaged 185,000 per month over the last 2 months.

Two industries with unusually large increases in January—construction and retail trade—accounted for much of the December-to-January increase. Employment in both industries had declined substantially in December after seasonal adjustment. With unusually harsh weather, construction employment dropped by 50,000 in December. January was a month of very mild weather, and more than the usual number of construction projects continued, resulting in a substantial seasonally adjusted employment increase. The underlying trend in retail trade also cannot be determined by looking at the January estimates alone. Based on past experience, we know that retail stores usually add large numbers of jobs to prepare for the Christmas season and then lay off workers in January. Small differences in the magnitude of these movements can affect the size of the seasonally adjusted change.

In contrast, the large decline in auto manufacturing employment of 90,000 jobs reflects temporary plant closings. Many of the workers affected by these shutdowns are now back on the job. In addition to the direct effects of the January layoffs on auto industry employment, the limitation in production schedules also, not surprisingly, found its way into related industries; employment in fabricated metals and rubber and plastic products was down a combined 25,000.

Employment in the services industry rose by 105,000 in January. Here, the situation was very typical of the past year or so—rapid job creation in health services, sluggishness in business services, and steady growth in the other services industries. Increases also were registered elsewhere in the service-producing sector, with transportation and wholesale trade each adding about 25,000 jobs, and finance, insurance, and real estate adding 10,000.

The jobless rate in January continued the pattern of remarkable stability that it has followed for many months now. Among the major demographic groups, the only over-the-month change of note occurred among Hispanics. While the jobless rate for this group fell from 8.5 to 7.1 percent, the volatility of the series requires several months of data to determine a trend.

The temporary job cutbacks in auto manufacturing showed up in the unemployment rate for workers in that industry, which jumped from about 7 percent in December to 20 percent in January. This contributed to a further increase in the overall manufacturing jobless rate, which has been edging up for several months.

These increases, although heavily felt in some areas as shown by a rise in the Michigan jobless rate, have not had much of an impact on the overall rate of unemployment.

In summary, unemployment in January remained where it has been for nearly a year and a half. Payroll employment continued to grow, but the January job increases in construction and retail trade may be somewhat overstated. In contrast, large temporary job losses occurred in the automobile industry.

Mr. Chairman, we would be glad to try to answer any questions you may have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989									
January.....	6.0	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-
February....	5.6	5.2	5.2	5.2	5.2	5.2	5.1	5.2	.1
March.....	5.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	-
April.....	5.1	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
May.....	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.1	.1
June.....	5.5	5.3	5.3	5.3	5.2	5.3	5.3	5.3	.1
July.....	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
August.....	5.1	5.3	5.3	5.3	5.2	5.3	5.2	5.2	.1
September...	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4	.1
1990									
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
February 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components--agricultural employment, nonagricultural employment and unemployment--for 4 age-sex groups--males and females, ages 16-19 and 20 years and over--are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolate factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: JANUARY 1990

Payroll employment rose in January and unemployment was about unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.2 percent and the civilian worker rate was 5.3 percent. Both had been 5.3 percent in December.

Employment, as measured by the survey of nonfarm business establishments, rose by 275,000 in January to 109.8 million. A strong, largely weather-related, rebound in construction and continuing growth in the service-producing sector offset sizable cutbacks in factory employment that were concentrated in auto manufacturing. Total civilian employment, as measured by the survey of households, remained at 117.9 million in January.

Unemployment (Household Survey Data)

The number of unemployed persons was about unchanged in January at 6.5 million, seasonally adjusted, and the civilian worker unemployment rate remained at 5.3 percent. The civilian worker rate has been 5.3 percent for 8 consecutive months. (See table A-2.)

Jobless rates were little changed over the month for most individual worker groups--adult men (4.7 percent), adult women (4.6 percent), teenagers (14.5 percent), and whites (4.5 percent). The rate for all blacks (11.3 percent) was also little changed, but that for black teenagers, which is quite volatile, dipped to 26.7 percent. The rate for Hispanics, which also fluctuates considerably, fell by 1.4 percentage points to 7.1 percent. (See tables A-2 and A-3.)

Although the total number of unemployed was little changed, the number of jobless persons who were on layoff from their jobs rose slightly in January. This total has been trending upward since mid-1989. Over the same period, the jobless rate for workers in the manufacturing industry has also increased significantly, rising by nearly a full percentage point to 5.9 percent. (See tables A-8 and A-6.)

The number of persons working part time for economic reasons--often referred to as the partially unemployed--rose by 180,000 in January to about 5 million. (See table A-4.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			
	1989		1989		1990	Dec.-Jan. change
	III	IV	Nov.	Dec.	Jan.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/.....	125,720	126,098	126,192	126,246	126,094	-152
Total employment 1/.	119,153	119,474	119,540	119,588	119,560	-28
Civilian labor force..	124,035	124,394	124,488	124,546	124,397	-149
Civilian employment.	117,468	117,770	117,836	117,888	117,863	-25
Unemployment.....	6,567	6,624	6,652	6,658	6,535	-123
Not in labor force....	62,567	62,624	62,529	62,619	62,896	277
Discouraged workers.	817	827	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.2	5.3	5.3	5.3	5.2	-0.1
All civilian workers	5.3	5.3	5.3	5.3	5.3	.0
Adult men.....	4.6	4.6	4.6	4.6	4.7	.1
Adult women.....	4.7	4.8	4.8	4.8	4.6	-.2
Teenagers.....	15.0	15.2	15.3	15.2	14.5	-.7
White.....	4.5	4.5	4.5	4.6	4.5	-.1
Black.....	11.3	11.8	11.9	11.8	11.3	-.5
Hispanic origin...	8.6	8.1	8.0	8.5	7.1	-1.4
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	108,917	p109,390	109,452	p109,548	p109,823	p275
Goods-producing.....	25,659	p25,582	25,609	p25,533	p25,526	p-7
Service-producing...	83,258	p83,809	83,843	p84,015	p84,297	p282
	Hours of work					
Average weekly hours:						
Total private.....	34.7	p34.6	34.6	p34.5	p34.6	p0.1
Manufacturing.....	41.0	p40.7	40.7	p40.7	p40.7	p.0
Overtime.....	3.8	p3.7	3.7	p3.6	p3.6	p.0

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment held at 117.9 million in January, seasonally adjusted, and the employment-population ratio was essentially unchanged at 62.9 percent. The civilian labor force (124.4 million) and the labor force participation rate (66.4 percent) were also little changed in January. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Total nonagricultural payroll employment increased by 275,000 in January to a seasonally adjusted level of 109.8 million. Over the year, the number of payroll jobs has risen by 2.4 million. (See table B-1.)

In the goods-producing sector, construction employment increased by 105,000 (seasonally adjusted) in January, following a 50,000 decrease in December due to unusually poor weather. In contrast, the weather in January was unusually mild. Job cutbacks continued in manufacturing, with employment falling by 110,000 over the month. Temporary plant shutdowns in the auto industry accounted for most of the over-the-month decrease. Employment also fell in two related industries--fabricated metal products and rubber and plastics. Elsewhere in manufacturing, there was little over-the-month movement in the individual industries.

In the service-producing sector, retail trade employment rose by 115,000 in January after seasonal adjustment, following a decrease in the previous month. Within retail trade, general merchandise stores, food stores, and restaurants all had job gains of 25,000. The services industry experienced employment gains of 105,000, with health services accounting for nearly half the increase. Both the transportation and wholesale trade industries had job gains of 25,000 in January, and finance, insurance, and real estate had a small employment increase.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonagricultural payrolls edged up 0.1 hour in January to 34.6 hours, seasonally adjusted. In manufacturing, both the average workweek and average overtime were unchanged at 40.7 and 3.6 hours, respectively. (See table B-2.)

Largely reflecting the changes in employment, the index of aggregate weekly hours of private production or nonsupervisory workers rose 0.6 percent in January to 129.6 (1977=100), while the manufacturing index fell by the same amount to 93.9. Since last April, the manufacturing index has fallen by 3.4 percent. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonagricultural payrolls rose by 0.1 percent in January on a seasonally adjusted basis, while average weekly earnings rose by 0.4 percent. Before seasonal adjustment, average hourly earnings rose 5 cents to $9.89, and average weekly earnings fell $2.22 to $338.24. Over the year, average hourly earnings increased by 3.7 percent, and average weekly earnings rose by 2.8 percent. (See tables B-3 and B-4.)

The Employment Situation for February 1990 will be released on Friday, March 9, at 8:30 A.M. (EST).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-3a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are calculated for 6 months, along with the introduction of new benchmarks, which are discussed at the end of the next section, and again with the release of data for October. In both surveys, revisions to data published over the previous 5 years are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000, and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
TOTAL									
Noninstitutional population[2]	187,340	188,865	188,990	187,340	188,428	188,580	188,721	188,885	188,990
Labor force[3]	123,781	125,698	124,990	124,961	125,725	125,857	126,192	126,246	126,094
Participation rate[4]	66.1	66.6	66.1	66.7	66.7	66.7	66.9	66.8	66.7
Total employed[5]	116,482	119,398	117,734	118,336	119,121	119,294	119,540	119,588	119,580
Employment-population ratio[6]	62.2	63.2	62.3	63.2	63.2	63.3	63.3	63.3	63.3
Resident Armed Forces	1,696	1,700	1,697	1,696	1,702	1,709	1,704	1,700	1,697
Civilian employed	114,786	117,698	116,037	116,640	117,419	117,585	117,836	117,888	117,883
Agriculture	2,831	2,862	2,720	3,268	3,219	3,197	3,180	3,197	3,134
Nonagricultural industries	111,955	114,836	113,317	113,372	114,200	114,388	114,676	114,691	114,728
Unemployed	7,309	6,300	7,256	6,625	6,604	6,563	6,652	6,658	6,535
Unemployment rate[7]	5.9	5.0	5.8	5.3	5.3	5.2	5.3	5.3	5.2
Not in labor force	63,549	63,167	64,000	62,379	62,703	62,723	62,529	62,619	62,896
Men, 16 years and over									
Noninstitutional population[2]	89,914	90,678	90,772	89,914	90,456	90,535	90,606	90,678	90,772
Labor force[3]	68,197	69,164	68,844	68,838	69,360	69,599	69,635	69,725	69,539
Participation rate[4]	75.8	76.3	75.8	76.7	76.7	76.9	76.9	76.9	76.6
Total employed[5]	63,944	65,800	64,802	65,296	65,681	66,046	66,011	66,143	65,943
Employment-population ratio[6]	71.1	72.3	71.2	72.6	72.6	73.0	72.9	72.9	72.6
Resident Armed Forces	1,532	1,525	1,523	1,532	1,531	1,533	1,529	1,525	1,523
Civilian employed	62,412	64,075	63,079	63,764	64,150	64,513	64,482	64,618	64,420
Unemployed	4,252	3,565	4,242	3,542	3,679	3,553	3,624	3,582	3,597
Unemployment rate[7]	6.2	5.2	6.2	5.3	5.3	5.1	5.2	5.1	5.2
Women, 16 years and over									
Noninstitutional population[2]	97,427	98,187	98,218	97,427	97,972	98,045	98,115	98,187	98,218
Labor force[3]	55,584	56,534	56,145	56,025	56,366	56,258	56,557	56,521	56,555
Participation rate[4]	57.1	57.6	57.2	57.5	57.5	57.4	57.6	57.6	57.6
Total employed[5]	52,538	53,798	53,132	53,040	53,440	53,248	53,529	53,445	53,617
Employment-population ratio[6]	53.9	54.8	54.1	54.4	54.5	54.3	54.6	54.4	54.6
Resident Armed Forces	164	175	174	164	171	176	175	175	174
Civilian employed	52,374	53,623	52,958	52,876	53,269	53,072	53,354	53,270	53,443
Unemployed	3,057	2,735	3,014	2,985	2,925	3,010	3,028	3,076	2,938
Unemployment rate[7]	5.5	4.8	5.4	5.3	5.2	5.4	5.4	5.4	5.2

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
TOTAL									
Civilian noninstitutional population	185,644	187,165	187,293	185,644	186,726	186,871	187,017	187,165	187,293
Civilian labor force	122,095	123,998	123,293	123,265	124,023	124,148	124,488	124,546	124,397
Participation rate	65.8	66.3	65.8	66.4	66.4	66.4	66.6	66.5	66.4
Employed	114,786	117,698	116,037	116,640	117,419	117,585	117,836	117,888	117,863
Employment-population ratio[2]	61.8	62.9	62.0	62.8	62.9	62.9	63.0	63.0	62.9
Unemployed	7,309	6,300	7,256	6,625	6,604	6,563	6,652	6,658	6,535
Unemployment rate	6.0	5.1	5.9	5.4	5.3	5.3	5.3	5.3	5.3
Men, 20 years and over									
Civilian noninstitutional population	81,162	82,055	82,168	81,162	81,790	81,905	81,968	82,055	82,168
Civilian labor force	62,926	63,914	63,654	63,285	63,771	63,918	63,967	64,071	63,958
Participation rate	77.5	77.8	77.5	78.0	78.0	78.0	78.0	78.1	77.8
Employed	59,442	60,862	60,042	60,398	60,729	61,026	61,033	61,154	60,976
Employment-population ratio[2]	73.2	74.2	73.1	74.4	74.2	74.5	74.5	74.5	74.2
Agriculture	2,054	2,119	2,040	2,286	2,330	2,304	2,292	2,293	2,269
Nonagricultural industries	57,387	58,743	58,002	58,112	58,399	58,722	58,741	58,861	58,706
Unemployed	3,485	2,952	3,612	2,887	3,042	2,892	2,934	2,917	2,983
Unemployment rate	5.5	4.6	5.7	4.6	4.8	4.5	4.6	4.6	4.7
Women, 20 years and over									
Civilian noninstitutional population	90,072	91,042	91,091	90,072	90,771	90,860	90,952	91,042	91,091
Civilian labor force	51,850	52,761	52,575	51,961	52,358	52,281	52,541	52,586	52,686
Participation rate	57.6	58.0	57.7	57.7	57.7	57.5	57.8	57.8	57.8
Employed	49,287	50,459	50,025	49,517	49,984	49,796	50,043	50,048	50,255
Employment-population ratio[2]	54.7	55.4	54.9	55.0	55.1	54.8	55.0	55.0	55.2
Agriculture	606	551	513	704	660	641	624	618	594
Nonagricultural industries	48,681	49,908	49,512	48,813	49,324	49,155	49,419	49,430	49,661
Unemployed	2,563	2,302	2,550	2,444	2,374	2,485	2,498	2,538	2,431
Unemployment rate	4.9	4.4	4.9	4.7	4.5	4.8	4.8	4.8	4.6
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,410	14,067	14,034	14,410	14,166	14,107	14,097	14,067	14,034
Civilian labor force	7,319	7,424	7,063	8,019	7,894	7,949	7,980	7,889	7,752
Participation rate	50.8	52.8	50.3	55.6	55.7	56.3	56.6	56.1	55.2
Employed	6,057	6,377	5,970	6,725	6,706	6,763	6,760	6,686	6,631
Employment-population ratio[2]	42.0	45.3	42.5	46.7	47.3	47.9	48.0	47.5	47.3
Agriculture	171	192	167	278	229	252	244	286	270
Nonagricultural industries	5,886	6,185	5,803	6,447	6,477	6,511	6,516	6,400	6,361
Unemployed	1,261	1,047	1,093	1,294	1,188	1,186	1,220	1,203	1,121
Unemployment rate	17.2	14.1	15.5	16.1	15.0	14.9	15.3	15.2	14.5

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
WHITE									
Civilian noninstitutional population	158,865	159,832	159,938	158,865	159,549	159,644	159,736	159,832	159,938
Civilian labor force	105,020	106,406	105,906	105,999	106,393	106,618	106,834	106,896	106,884
Participation rate	66.1	66.6	66.2	66.7	66.7	66.8	66.9	66.9	66.8
Employed	99,506	101,793	100,419	101,137	101,579	101,862	101,991	102,032	102,074
Employment-population ratio[1]	62.6	63.7	62.8	63.7	63.7	63.8	63.8	63.8	63.8
Unemployed	5,514	4,613	5,486	4,862	4,814	4,756	4,843	4,864	4,811
Unemployment rate	5.3	4.3	5.2	4.6	4.5	4.5	4.5	4.6	4.5
Men, 20 years and over									
Civilian labor force	54,854	55,556	55,464	55,160	55,465	55,626	55,676	55,747	55,771
Participation rate	78.0	78.2	78.0	78.4	78.3	78.5	78.5	78.5	78.4
Employed	52,159	53,338	52,703	52,996	53,153	53,483	53,482	53,580	53,560
Employment-population ratio[1]	74.2	75.1	74.1	75.4	75.1	75.5	75.4	75.5	75.3
Unemployed	2,695	2,218	2,761	2,164	2,312	2,143	2,194	2,167	2,211
Unemployment rate	4.9	4.0	5.0	3.9	4.2	3.9	3.9	3.9	4.0
Women, 20 years and over									
Civilian labor force	43,803	44,574	44,379	43,890	44,198	44,207	44,360	44,469	44,475
Participation rate	57.0	57.5	57.2	57.1	57.2	57.1	57.3	57.4	57.4
Employed	41,948	42,937	42,504	42,153	42,520	42,437	42,586	42,641	42,718
Employment-population ratio[1]	54.6	55.4	54.8	54.9	55.0	54.9	55.0	55.0	55.1
Unemployed	1,854	1,637	1,875	1,737	1,678	1,770	1,774	1,828	1,757
Unemployment rate	4.2	3.7	4.2	4.0	3.8	4.0	4.0	4.1	4.0
Both sexes, 16 to 19 years									
Civilian labor force	6,363	6,277	6,063	6,949	6,730	6,785	6,798	6,680	6,639
Participation rate	54.5	55.3	53.6	59.5	58.7	59.4	59.7	58.9	58.7
Employed	5,399	5,518	5,213	5,986	5,906	5,942	5,923	5,811	5,796
Employment-population ratio[1]	46.2	48.6	46.1	51.3	51.5	52.0	52.0	51.2	51.3
Unemployed	964	759	850	961	824	843	875	869	843
Unemployment rate	15.2	12.1	14.0	13.8	12.2	12.4	12.9	13.0	12.7
Men	18.5	14.0	15.4	15.9	13.3	13.8	14.3	14.0	12.9
Women	11.7	10.1	12.6	11.6	11.1	10.9	11.3	11.9	12.4
BLACK									
Civilian noninstitutional population	20,877	21,164	21,163	20,877	21,085	21,108	21,136	21,164	21,163
Civilian labor force	13,275	13,487	13,351	13,447	13,518	13,507	13,576	13,522	13,510
Participation rate	63.6	63.7	63.1	64.4	64.1	64.0	64.2	63.9	63.8
Employed	11,705	11,989	11,821	11,867	11,938	11,923	11,954	11,920	11,978
Employment-population ratio[1]	56.1	56.6	55.9	56.8	56.6	56.5	56.6	56.3	56.6
Unemployed	1,570	1,498	1,530	1,580	1,580	1,584	1,622	1,602	1,532
Unemployment rate	11.8	11.1	11.5	11.7	11.7	11.7	11.9	11.8	11.3
Men, 20 years and over									
Civilian labor force	6,163	6,206	6,152	6,209	6,239	6,234	6,247	6,244	6,189
Participation rate	74.3	73.6	73.0	74.8	74.6	74.2	74.2	74.0	73.5
Employed	5,504	5,554	5,425	5,578	5,610	5,593	5,587	5,569	5,496
Employment-population ratio[1]	66.3	65.9	64.4	67.2	67.0	66.6	66.4	66.0	65.2
Unemployed	659	652	727	631	629	641	660	675	693
Unemployment rate	10.7	10.5	11.8	10.2	10.1	10.3	10.6	10.8	11.2
Women, 20 years and over									
Civilian labor force	6,357	6,369	6,411	6,346	6,360	6,336	6,373	6,311	6,393
Participation rate	61.1	60.3	60.7	61.0	60.5	60.2	60.4	59.7	60.5
Employed	5,712	5,779	5,819	5,699	5,743	5,706	5,722	5,681	5,802
Employment-population ratio[1]	54.9	54.7	55.1	54.8	54.6	54.2	54.2	53.8	54.9
Unemployed	645	590	593	647	617	630	651	630	591
Unemployment rate	10.1	9.3	9.2	10.2	9.7	9.9	10.2	10.0	9.2
Both sexes, 16 to 19 years									
Civilian labor force	755	912	788	892	919	937	956	967	928
Participation rate	34.7	42.1	36.3	41.0	41.8	43.0	44.0	44.6	42.8
Employed	490	655	577	590	585	624	645	670	680
Employment-population ratio	22.5	30.3	26.6	27.1	26.6	28.6	29.7	30.9	31.3
Unemployed	265	257	210	302	334	313	311	297	248
Unemployment rate	35.1	28.1	26.7	33.9	36.3	33.4	32.5	30.7	26.7
Men	37.8	29.0	30.3	35.6	33.8	32.0	32.3	30.1	29.2
Women	32.3	27.2	22.7	31.9	38.8	34.9	32.7	31.4	24.0

See footnotes at end of table.

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,584	14,019	14,080	13,584	13,894	13,936	13,977	14,019	14,080
Civilian labor force	9,110	9,410	9,322	9,211	9,342	9,339	9,424	9,495	9,440
Participation rate	67.2	67.1	66.2	67.9	67.2	67.0	67.4	67.7	67.0
Employed	8,274	8,651	8,585	8,452	8,564	8,595	8,672	8,691	8,769
Employment-population ratio[2]	61.0	61.7	61.0	62.3	61.6	61.7	62.0	62.0	62.3
Unemployed	836	759	738	759	778	744	752	804	671
Unemployment rate	9.2	8.1	7.9	8.2	8.3	8.0	8.0	8.5	7.1

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	114,786	117,698	116,037	116,640	117,419	117,585	117,836	117,888	117,863
Married men, spouse present	40,475	41,075	40,654	40,794	40,849	40,839	40,886	41,041	40,982
Married women, spouse present	29,323	29,897	29,658	29,557	29,508	29,544	29,767	29,695	29,897
Women who maintain families	6,435	6,442	6,259	6,396	6,429	6,354	6,351	6,349	6,215
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,420	1,505	1,394	1,667	1,680	1,678	1,687	1,677	1,634
Self-employed workers	1,287	1,257	1,250	1,395	1,424	1,406	1,373	1,369	1,354
Unpaid family workers	124	99	75	177	132	124	122	125	107
Nonagricultural industries:									
Wage and salary workers	103,158	105,919	104,510	104,380	105,476	105,504	105,960	105,643	105,747
Government	17,532	18,035	17,820	17,346	17,613	17,595	17,681	17,728	17,626
Private industries	85,626	87,884	86,690	87,034	87,863	87,909	88,279	87,915	88,121
Private households	1,116	1,051	974	1,187	1,065	987	1,051	1,077	1,035
Other industries	84,510	86,833	85,716	85,847	86,798	86,922	87,228	86,838	87,086
Self-employed workers	8,517	8,679	8,587	8,581	8,581	8,610	8,526	8,653	8,733
Unpaid family workers	280	237	240	298	279	280	264	251	256
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	5,138	4,709	5,043	5,082	4,864	4,767	4,803	4,802	4,983
Slack work	2,834	2,333	2,717	2,328	2,321	2,314	2,297	2,277	2,402
Could only find part-time work	2,150	2,026	2,052	2,363	2,161	2,082	2,162	2,106	2,255
Voluntary part time	15,755	16,465	15,289	15,386	15,506	15,368	15,254	15,388	14,931
Nonagricultural industries:									
Part time for economic reasons	4,914	4,485	4,814	4,831	4,605	4,526	4,552	4,554	4,729
Slack work	2,455	2,151	2,536	2,168	2,165	2,166	2,132	2,111	2,240
Could only find part-time work	2,112	1,998	2,009	2,287	2,095	2,021	2,097	2,051	2,172
Voluntary part time	15,374	16,106	14,921	14,947	15,076	14,936	14,805	14,983	14,515

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

Table A-5. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1988	1989				1989		1990
	IV	I	II	III	IV	Nov.	Dec.	Jan.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
U-2 Job losers as a percent of the civilian labor force	2.4	2.4	2.3	2.4	2.5	2.5	2.5	2.6
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.1	4.0	4.0	4.0	4.1	4.1	4.1	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.0	4.9	4.9	5.0	5.0	5.0	5.0	5.0
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.1	5.2	5.2	5.3	5.3	5.3	5.2
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.2	5.3	5.3	5.3	5.3	5.3	5.3
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.4	7.2	7.3	7.2	7.2	7.3	7.3	7.3
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	8.2	7.9	8.0	7.9	7.9	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
CHARACTERISTIC									
Total, 16 years and over	6,625	6,658	6,535	5.4	5.3	5.3	5.3	5.3	5.3
Men, 16 years and over	3,640	3,582	3,597	5.4	5.4	5.2	5.3	5.3	5.3
Men, 20 years and over	2,887	2,917	2,983	4.6	4.8	4.5	4.6	4.6	4.7
Women, 16 years and over	2,985	3,076	2,938	5.3	5.2	5.4	5.4	5.5	5.2
Women, 20 years and over	2,444	2,538	2,431	4.7	4.5	4.8	4.8	4.8	4.6
Both sexes, 16 to 19 years	1,294	1,203	1,121	16.1	15.0	14.9	15.3	15.2	14.5
Married men, spouse present	1,288	1,291	1,421	3.1	3.3	3.0	3.1	3.0	3.4
Married women, spouse present	1,121	1,202	1,162	3.7	3.8	3.9	3.8	3.9	3.7
Women who maintain families	551	556	503	7.9	7.7	7.8	8.2	8.1	7.5
Full-time workers	5,244	5,299	5,300	5.0	5.0	4.9	5.0	5.0	5.0
Part-time workers	1,406	1,377	1,251	7.7	7.3	7.1	7.4	7.5	7.0
Labor force time lost[2]	—	—	—	6.1	6.0	5.9	5.9	6.0	6.0
INDUSTRY									
Nonagricultural private wage and salary workers	5,102	5,038	5,160	5.5	5.4	5.3	5.4	5.4	5.5
Goods-producing industries	1,859	1,916	1,979	6.3	6.3	6.2	6.3	6.5	6.7
Mining	44	32	53	6.2	8.4	4.8	6.2	4.4	6.8
Construction	656	630	623	10.3	10.1	9.3	9.8	9.8	9.3
Manufacturing	1,159	1,254	1,304	5.2	5.2	5.4	5.4	5.6	5.9
Durable goods	638	718	773	4.8	4.9	5.2	5.4	5.4	5.8
Nondurable goods	521	536	531	5.6	5.5	5.6	5.3	5.9	5.9
Service-producing industries	3,243	3,122	3,181	5.2	5.0	4.9	5.0	4.9	5.0
Transportation and public utilities	252	219	271	3.9	4.5	3.9	3.6	3.4	4.3
Wholesale and retail trade	1,496	1,506	1,484	6.4	5.9	5.9	6.4	6.3	6.2
Finance and service industries	1,495	1,397	1,426	4.6	4.5	4.3	4.3	4.2	4.3
Government workers	487	478	428	2.7	2.8	2.7	2.7	2.6	2.4
Agricultural wage and salary workers	176	180	166	9.5	7.8	9.8	12.1	9.7	9.2

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

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Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
DURATION									
Less than 5 weeks	3,464	2,982	3,447	3,140	3,169	3,166	3,256	3,302	3,119
5 to 14 weeks	2,258	2,026	2,294	1,998	2,030	1,995	1,991	2,013	2,012
15 weeks and over	1,586	1,293	1,514	1,499	1,359	1,378	1,422	1,362	1,430
15 to 26 weeks	817	695	833	761	769	743	765	730	777
27 weeks and over	770	598	682	738	590	635	657	632	653
Average (mean) duration, in weeks	12.3	11.8	11.7	12.6	11.5	11.7	11.6	11.5	12.1
Median duration, in weeks	5.6	5.1	5.1	5.6	5.0	5.0	4.8	4.8	5.1
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	47.4	47.3	47.5	47.3	48.3	48.4	48.8	49.5	47.5
5 to 14 weeks	30.9	32.2	31.6	30.1	31.0	30.5	29.8	30.1	30.7
15 weeks and over	21.7	20.5	20.9	22.6	20.7	21.1	21.3	20.4	21.8
15 to 26 weeks	11.2	11.0	11.5	11.5	11.7	11.4	11.5	10.9	11.8
27 weeks and over	10.5	9.5	9.4	11.1	9.0	9.7	9.8	9.5	9.9

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
NUMBER OF UNEMPLOYED									
Job losers	3,701	3,172	3,819	3,088	2,932	2,979	3,092	3,097	3,183
On layoff	1,210	1,033	1,543	813	852	780	969	957	1,033
Other job losers	2,491	2,139	2,276	2,275	2,080	2,199	2,123	2,140	2,150
Job leavers	1,087	962	1,113	973	1,034	994	1,049	1,055	1,016
Reentrants	1,866	1,615	1,772	1,827	1,920	1,890	1,845	1,853	1,730
New entrants	675	551	552	768	648	685	695	686	640
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	50.7	50.3	52.6	46.4	44.9	45.5	46.3	46.3	48.5
On layoff	16.6	16.4	21.3	12.2	13.0	11.9	14.5	14.3	15.7
Other job losers	34.1	34.0	31.4	34.2	31.8	33.6	31.8	32.0	32.7
Job leavers	14.6	15.3	15.3	14.6	15.8	15.2	15.7	15.8	15.5
Reentrants	25.5	25.6	24.4	27.4	29.4	28.9	27.6	27.7	26.3
New entrants	9.2	8.7	7.6	11.5	9.9	10.5	10.4	10.3	9.7
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	3.0	2.6	3.1	2.5	2.4	2.4	2.5	2.5	2.6
Job leavers	.9	.8	.9	.8	.8	.8	.8	.8	.8
Reentrants	1.5	1.3	1.4	1.5	1.5	1.5	1.5	1.5	1.4
New entrants	.6	.4	.4	.6	.5	.6	.6	.6	.5

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Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
Total, 16 years and over	6,625	6,658	6,535	5.4	5.3	5.3	5.3	5.3	5.3
16 to 24 years	2,597	2,428	2,299	11.6	11.1	11.1	11.3	11.2	10.6
16 to 19 years	1,294	1,203	1,121	16.1	15.0	14.9	15.3	15.2	14.5
16 to 17 years	563	558	434	17.8	17.2	16.9	17.4	18.1	14.8
18 to 19 years	732	645	683	15.0	14.2	13.5	13.8	13.4	14.2
20 to 24 years	1,303	1,225	1,178	9.1	8.8	8.9	9.0	8.9	8.5
25 years and over	4,073	4,242	4,279	4.0	4.1	4.1	4.1	4.1	4.2
25 to 54 years	3,629	3,744	3,780	4.2	4.3	4.2	4.2	4.3	4.3
55 years and over	462	494	525	3.0	3.0	3.0	3.2	3.2	3.4
Men, 16 years and over	3,640	3,582	3,597	5.4	5.4	5.2	5.3	5.3	5.3
16 to 24 years	1,459	1,361	1,287	12.5	11.9	11.7	12.0	11.8	11.2
16 to 19 years	753	665	614	18.3	15.7	15.9	16.7	16.1	15.1
16 to 17 years	317	319	214	19.9	19.5	18.5	19.0	19.6	14.2
18 to 19 years	438	346	397	17.2	13.7	14.2	15.1	13.8	15.6
20 to 24 years	706	696	653	9.3	9.8	9.3	9.4	9.5	8.9
25 years and over	2,225	2,238	2,373	4.0	4.1	3.9	4.0	3.9	4.2
25 to 54 years	1,970	1,917	2,079	4.2	4.1	4.0	4.1	4.0	4.3
55 years and over	261	314	313	3.0	3.5	3.2	3.5	3.8	3.8
Women, 16 years and over	2,985	3,076	2,938	5.3	5.2	5.4	5.4	5.5	5.2
16 to 24 years	1,138	1,067	1,032	10.6	10.2	10.4	10.4	10.4	10.1
16 to 19 years	541	538	507	13.9	14.4	13.8	13.8	14.3	13.7
16 to 17 years	246	239	220	15.7	14.7	15.0	15.7	16.5	15.5
18 to 19 years	294	299	286	12.7	14.6	12.8	12.3	13.0	12.6
20 to 24 years	597	529	525	8.8	7.7	8.5	8.5	8.2	8.0
25 years and over	1,848	2,004	1,906	4.1	4.1	4.2	4.2	4.3	4.1
25 to 54 years	1,653	1,827	1,701	4.3	4.4	4.4	4.4	4.6	4.3
55 years and over	201	180	212	3.1	2.4	2.8	2.9	2.7	3.3

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
Civilian noninstitutional population	26,779	27,332	27,355	26,779	27,177	27,227	27,280	27,332	27,355
Civilian labor force	17,075	17,592	17,387	17,302	17,641	17,601	17,586	17,648	17,602
Participation rate	63.8	64.4	63.6	64.6	64.9	64.6	64.8	64.6	64.3
Employed	15,279	15,905	15,617	15,492	15,847	15,797	15,861	15,841	15,827
Employment-population ratio[2]	57.1	58.2	57.1	57.9	58.3	58.0	58.1	58.0	57.9
Unemployed	1,795	1,687	1,769	1,810	1,794	1,804	1,825	1,807	1,775
Unemployment rate	10.5	9.6	10.2	10.5	10.2	10.2	10.3	10.2	10.1
Not in labor force	9,704	9,741	9,968	9,477	9,536	9,626	9,594	9,684	9,753

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

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Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990
Total, 16 years and over	114,786	116,037	7,309	7,256	6.0	5.9
Managerial and professional specialty	29,810	30,824	625	609	2.1	1.9
Executive, administrative, and managerial	14,476	14,972	403	320	2.7	2.1
Professional specialty	15,333	15,852	222	289	1.4	1.8
Technical, sales, and administrative support	35,430	36,512	1,606	1,696	4.3	4.4
Technicians and related support	3,585	3,665	105	123	2.8	3.2
Sales occupations	13,624	14,293	775	773	5.4	5.1
Administrative support, including clerical	18,221	18,554	729	800	3.8	4.1
Service occupations	15,473	15,313	1,167	1,058	7.0	6.5
Private household	902	782	49	53	5.1	6.4
Protective service	1,979	1,937	94	76	4.6	3.8
Service, except private household and protective	12,593	12,594	1,024	929	7.5	6.9
Precision production, craft, and repair	13,658	13,462	977	939	6.7	6.5
Mechanics and repairers	4,627	4,419	188	153	3.9	3.4
Construction trades	4,790	5,009	593	542	11.0	9.8
Other precision production, craft, and repair	4,241	4,034	196	244	4.4	5.7
Operators, fabricators, and laborers	17,574	17,123	1,944	2,069	10.0	10.8
Machine operators, assemblers, and inspectors	8,180	7,796	798	893	8.9	10.3
Transportation and material moving occupations	4,687	4,609	412	480	8.1	9.4
Handlers, equipment cleaners, helpers, and laborers	4,707	4,718	734	695	13.5	12.8
Construction laborers	626	681	204	220	24.5	24.4
Other handlers, equipment cleaners, helpers, and laborers	4,081	4,037	530	475	11.5	10.5
Farming, forestry, and fishing	2,841	2,803	287	244	9.2	8.0

Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990	Jan. 1989	Jan. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,334	7,556	6,725	6,876	6,456	6,559	269	317	4.0	4.6
35 to 49 years	6,408	6,508	6,100	6,176	5,843	5,895	257	281	4.2	4.6
35 to 39 years	1,937	1,557	1,868	1,486	1,781	1,403	87	83	4.7	5.6
40 to 44 years	3,182	3,318	3,006	3,160	2,894	3,030	112	131	3.7	4.1
45 to 49 years	1,289	1,633	1,225	1,529	1,167	1,461	58	68	4.7	4.4
50 years and over	926	1,048	625	701	614	665	12	36	1.9	5.1
NONVETERANS										
Total, 35 to 49 years	15,784	16,860	14,733	15,776	14,013	15,047	719	728	4.9	4.6
35 to 39 years	7,177	7,722	6,761	7,288	6,418	6,965	343	323	5.1	4.4
40 to 44 years	4,592	4,982	4,293	4,654	4,107	4,433	186	222	4.3	4.8
45 to 49 years	4,016	4,156	3,679	3,834	3,489	3,650	190	184	5.2	4.8

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population. Data for 30-to 34-year-old veterans are no longer shown in this table because the group is rapidly disappearing (into the 35-39 age category) and the numbers remaining for some labor force categories are not large enough to warrant their continued publication.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
California									
Civilian noninstitutional population	21,238	21,680	21,718	21,238	21,560	21,602	21,642	21,680	21,718
Civilian labor force	14,333	14,524	14,442	14,382	14,661	14,673	14,653	14,627	14,491
Employed	13,572	13,829	13,647	13,659	13,914	13,955	13,913	13,854	13,734
Unemployed	762	695	794	723	747	718	740	773	757
Unemployment rate	5.3	4.8	5.5	5.0	5.1	4.9	5.1	5.3	5.2
Florida									
Civilian noninstitutional population	9,785	9,997	10,015	9,785	9,939	9,959	9,979	9,997	10,015
Civilian labor force	6,021	6,213	6,184	6,125	6,184	6,225	6,258	6,245	6,289
Employed	5,663	5,855	5,823	5,777	5,834	5,864	5,905	5,883	5,940
Unemployed	358	358	361	348	350	361	353	362	349
Unemployment rate	5.9	5.8	5.8	5.7	5.7	5.8	5.6	5.8	5.5
Illinois									
Civilian noninstitutional population	8,813	8,851	8,854	8,813	8,841	8,845	8,849	8,851	8,854
Civilian labor force	5,871	5,995	6,006	5,925	6,034	6,031	6,065	6,039	6,064
Employed	5,495	5,627	5,595	5,572	5,660	5,636	5,669	5,661	5,673
Unemployed	376	368	412	353	374	395	396	378	391
Unemployment rate	6.4	6.1	6.9	6.0	6.2	6.5	6.5	6.3	6.4
Massachusetts									
Civilian noninstitutional population	4,617	4,619	4,619	4,617	4,618	4,619	4,619	4,619	4,619
Civilian labor force	3,153	3,139	3,122	3,182	3,155	3,138	3,165	3,172	3,152
Employed	3,033	3,008	2,967	3,076	3,017	2,997	3,025	3,027	3,011
Unemployed	120	131	155	106	138	141	140	145	141
Unemployment rate	3.8	4.2	5.0	3.3	4.4	4.5	4.4	4.6	4.5
Michigan									
Civilian noninstitutional population	6,978	6,992	6,993	6,978	6,988	6,990	6,991	6,992	6,993
Civilian labor force	4,530	4,647	4,591	4,584	4,611	4,658	4,626	4,645	4,645
Employed	4,175	4,314	4,158	4,269	4,251	4,286	4,287	4,310	4,254
Unemployed	355	333	433	315	360	372	339	335	391
Unemployment rate	7.8	7.2	9.4	6.9	7.8	8.0	7.3	7.2	8.4
New Jersey									
Civilian noninstitutional population	6,034	6,031	6,030	6,034	6,032	6,032	6,032	6,031	6,030
Civilian labor force	3,997	3,998	3,980	4,015	3,992	4,021	4,034	4,006	3,994
Employed	3,816	3,859	3,773	3,858	3,812	3,828	3,834	3,857	3,810
Unemployed	181	138	207	157	180	193	200	149	184
Unemployment rate	4.5	3.5	5.2	3.9	4.5	4.8	5.0	3.7	4.6
New York									
Civilian noninstitutional population	13,807	13,804	13,803	13,807	13,805	13,806	13,806	13,804	13,803
Civilian labor force	8,654	8,787	8,741	8,623	8,666	8,674	8,738	8,782	8,709
Employed	8,169	8,305	8,263	8,204	8,203	8,253	8,278	8,278	8,300
Unemployed	485	482	478	419	463	421	460	484	409
Unemployment rate	5.6	5.5	5.5	4.9	5.3	4.9	5.3	5.5	4.7
North Carolina									
Civilian noninstitutional population	4,909	4,966	4,971	4,909	4,951	4,956	4,961	4,966	4,971
Civilian labor force	3,344	3,368	3,332	3,374	3,407	3,385	3,373	3,396	3,361
Employed	3,194	3,267	3,179	3,252	3,272	3,275	3,275	3,283	3,237
Unemployed	150	101	153	122	135	110	98	107	124
Unemployment rate	4.5	3.0	4.6	3.6	4.0	3.2	2.9	3.2	3.7
Ohio									
Civilian noninstitutional population	8,250	8,272	8,274	8,250	8,266	8,269	8,271	8,272	8,274
Civilian labor force	5,359	5,421	5,391	5,399	5,441	5,462	5,415	5,442	5,426
Employed	4,994	5,094	4,979	5,078	5,153	5,135	5,081	5,110	5,060
Unemployed	365	328	412	321	288	327	334	332	366
Unemployment rate	6.8	6.0	7.6	5.9	5.3	6.0	6.2	6.1	6.7

See footnotes at end of table.

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Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted			Seasonally adjusted					
	Jan. 1989	Dec. 1989	Jan. 1990	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990
Pennsylvania									
Civilian noninstitutional population	9,357	9,377	9,378	9,357	9,372	9,374	9,376	9,377	9,378
Civilian labor force	5,856	5,855	5,860	5,880	5,806	5,803	5,910	5,880	5,875
Employed	5,562	5,567	5,513	5,625	5,550	5,530	5,598	5,575	5,568
Unemployed	294	288	348	255	256	273	312	305	307
Unemployment rate	5.0	4.9	5.9	4.3	4.4	4.7	5.3	5.2	5.2
Texas									
Civilian noninstitutional population	12,144	12,288	12,300	12,144	12,249	12,263	12,276	12,286	12,300
Civilian labor force	8,302	8,392	8,321	8,416	8,426	8,460	8,450	8,423	8,440
Employed	7,670	7,902	7,840	7,824	7,888	7,908	7,854	7,866	7,999
Unemployed	632	490	481	592	538	552	596	557	441
Unemployment rate	7.6	5.8	5.8	7.0	6.4	6.5	7.1	6.6	5.2

These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

NOTE: The not seasonally adjusted data for 1989 have been revised to reflect the latest 1989 population estimates for the States. These revised estimates were used to develop seasonally adjusted data for 1985-89 and seasonal adjustment factors to be used in 1990.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/
Total	105,915	110,390	110,391	108,265	107,442	109,096	109,171	109,452	109,548	109,823
Total private	88,580	92,158	92,216	90,416	89,897	91,238	91,328	91,622	91,685	91,962
Goods-producing industries	23,859	25,848	25,511	24,958	25,626	25,614	25,603	25,609	25,533	25,526
Mining	702	744	748	728	711	730	731	737	739	748
Oil and gas extraction	393.5	418.5	420.2	416.8	393	408	409	414	416	417
Construction	4,841	5,494	5,241	4,971	5,267	5,325	5,335	5,353	5,385	5,409
General building contractors	1,317.2	1,425.7	1,389.5	1,338.9	1,404	1,396	1,386	1,391	1,390	1,419
Manufacturing	19,516	19,610	19,530	19,251	19,648	19,559	19,537	19,517	19,489	19,377
Production workers	13,312	13,365	13,289	13,039	13,423	13,319	13,307	13,276	13,258	13,151
Durable goods	11,947	11,992	11,953	11,759	11,603	11,480	11,457	11,439	11,411	11,310
Production workers	7,713	7,646	7,613	7,436	7,758	7,632	7,615	7,594	7,580	7,479
Lumber and wood products	759.8	767.8	757.8	747.2	784	759	764	765	766	771
Furniture and fixtures	533.8	550.8	528.7	522.5	532	528	525	525	523	521
Stone, clay, and glass products	586.7	606.0	593.6	581.2	607	597	600	602	600	602
Primary metal industries	787.4	772.6	772.5	767.6	786	777	776	772	771	767
Blast furnaces and basic steel products	276.4	267.8	270.2	268.2	276	273	271	269	270	268
Fabricated metal products	1,455.8	1,439.0	1,435.3	1,406.7	1,458	1,438	1,436	1,438	1,427	1,410
Machinery, except electrical	2,133.6	2,144.0	2,150.8	2,144.3	2,134	2,147	2,139	2,146	2,144	2,142
Electrical and electronic equipment	2,068.0	2,022.5	2,006.3	2,000.1	2,065	2,023	2,018	2,012	1,996	1,996
Transportation equipment	2,075.1	2,034.2	2,042.0	1,927.3	2,079	2,038	2,031	2,020	2,022	1,929
Motor vehicles and equipment	873.6	832.6	837.4	727.0	882	843	833	824	824	736
Instruments and related products	769.0	779.2	776.3	776.5	770	780	779	778	775	777
Miscellaneous manufacturing	580.1	596.3	589.8	585.1	590	595	591	589	591	595
Nondurable goods	7,969	8,118	8,077	7,992	8,045	8,079	8,080	8,078	8,078	8,067
Production workers	5,599	5,719	5,676	5,603	5,665	5,687	5,692	5,682	5,678	5,672
Food and kindred products	1,602.2	1,691.2	1,666.2	1,629.8	1,650	1,674	1,676	1,673	1,676	1,677
Tobacco manufactures	57.7	55.1	53.8	54.3	56	51	51	51	51	52
Textile mill products	725.7	724.1	720.4	711.6	728	725	724	721	719	714
Apparel and other textile products	1,084.1	1,090.8	1,078.2	1,065.4	1,092	1,088	1,084	1,084	1,079	1,074
Paper and allied products	692.0	698.2	699.9	696.4	696	697	697	697	699	700
Printing and publishing	1,594.0	1,623.6	1,626.8	1,622.9	1,595	1,612	1,612	1,617	1,619	1,625
Chemicals and allied products	1,077.5	1,095.9	1,099.8	1,095.2	1,084	1,095	1,096	1,098	1,103	1,102
Petroleum and coal products	156.9	164.3	161.8	159.4	160	163	164	164	163	163
Rubber and misc. plastics products	837.2	856.7	854.8	822.0	839	837	837	835	832	824
Leather and leather products	141.5	139.6	136.9	134.9	145	139	139	138	137	136
Service-producing industries	80,856	84,542	84,880	83,315	81,816	83,482	83,568	83,843	84,015	84,297
Transportation and public utilities	5,590	5,794	5,879	5,793	5,654	5,709	5,729	5,753	5,832	5,859
Transportation	3,387	3,635	3,665	3,586	3,439	3,546	3,566	3,592	3,614	3,641
Communication and public utilities	2,203	2,159	2,214	2,207	2,215	2,163	2,163	2,161	2,218	2,218
Wholesale trade	6,095	6,310	6,311	6,282	6,146	6,264	6,278	6,300	6,308	6,332
Durable goods	3,617	3,737	3,746	3,738	3,638	3,717	3,721	3,737	3,746	3,757
Nondurable goods	2,478	2,573	2,565	2,544	2,508	2,547	2,557	2,563	2,562	2,575
Retail trade	19,108	20,040	20,365	19,534	19,407	19,632	19,679	19,744	19,714	19,831
General merchandise stores	2,537.4	2,696.7	2,766.9	2,561.6	2,472	2,486	2,478	2,492	2,468	2,494
Food stores	3,183.1	3,570.7	3,412.2	3,348.9	3,200	3,296	3,321	3,334	3,342	3,366
Automotive dealers and service stations	2,117.1	2,164.4	2,149.8	2,137.2	2,143	2,157	2,169	2,169	2,161	2,163
Eating and drinking places	6,018.3	6,378.3	6,393.8	6,148.5	6,323	6,397	6,403	6,417	6,432	6,459
Finance, insurance, and real estate	6,685	6,848	6,864	6,830	6,744	6,852	6,851	6,871	6,882	6,892
Finance	3,299	3,347	3,359	3,356	3,308	3,343	3,345	3,357	3,362	3,363
Insurance	2,105	2,136	2,142	2,145	2,109	2,137	2,134	2,138	2,142	2,149
Real estate	1,281	1,365	1,363	1,329	1,329	1,372	1,372	1,376	1,378	1,380
Services	25,843	27,318	27,306	27,027	26,318	27,159	27,188	27,345	27,416	27,522
Business services	5,612.3	5,887.5	5,883.4	5,761.9	5,707	5,836	5,827	5,852	5,854	5,862
Health services	7,377.4	7,851.3	7,877.5	7,909.2	7,396	7,739	7,778	7,839	7,885	7,933
Government	17,535	18,232	18,175	17,849	17,545	17,866	17,843	17,830	17,863	17,861
Federal	2,960	2,970	2,972	2,966	2,978	2,996	2,984	2,982	2,972	2,984
State	4,047	4,287	4,244	4,108	4,084	4,182	4,153	4,162	4,157	4,145
Local	10,528	10,975	10,959	10,775	10,483	10,688	10,706	10,686	10,734	10,732

p = preliminary.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/
Total private	34.5	34.5	34.6	34.2	34.8	34.7	34.7	34.6	34.5	34.6
Mining	42.2	43.8	43.8	44.0	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.5	38.1	37.0	37.7	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.0	41.1	41.3	40.6	41.1	41.2	40.8	40.7	40.7	40.7
Overtime hours	3.8	3.9	3.9	3.5	3.9	3.8	3.7	3.7	3.6	3.6
Durable goods	41.8	41.5	41.9	41.2	41.8	41.6	41.2	41.2	41.2	41.3
Overtime hours	4.0	3.9	4.0	3.6	4.1	3.9	3.8	3.7	3.6	3.7
Lumber and wood products	39.7	40.1	40.2	39.6	40.3	40.2	40.4	40.3	40.1	40.2
Furniture and fixtures	39.4	39.8	40.2	39.1	39.8	39.6	39.2	39.4	39.1	39.5
Stone, clay, and glass products	41.5	42.5	41.5	41.3	42.5	42.2	42.3	42.4	41.6	42.2
Primary metal industries	43.7	42.8	43.1	42.7	43.6	42.8	42.5	42.6	42.5	42.6
Blast furnaces and basic steel products	44.0	43.0	43.4	43.3	44.0	42.9	42.8	43.0	43.0	43.5
Fabricated metal products	42.0	41.8	42.1	41.5	41.9	41.6	41.5	41.4	41.2	41.4
Machinery, except electrical	42.6	42.4	43.0	42.1	42.5	42.3	42.0	42.1	42.0	42.0
Electrical and electronic equipment	41.1	41.2	41.6	40.9	40.9	41.1	40.9	40.8	40.6	40.7
Transportation equipment	42.9	41.4	42.6	41.6	42.8	42.8	41.2	40.9	41.9	41.5
Motor vehicles and equipment	43.6	42.9	43.0	41.2	43.6	43.4	42.9	42.3	42.3	41.2
Instruments and related products	41.6	41.4	41.9	41.2	41.5	41.0	41.1	41.0	41.0	41.1
Miscellaneous manufacturing	39.3	40.2	40.0	39.3	39.4	39.2	39.3	39.7	39.3	39.5
Nondurable goods	39.9	40.6	40.5	39.8	40.1	40.2	40.3	40.1	39.9	40.0
Overtime hours	3.5	3.8	3.8	3.4	3.6	3.7	3.7	3.6	3.4	3.5
Food and kindred products	39.8	41.2	41.3	40.2	40.1	41.0	40.8	40.8	40.7	40.4
Tobacco manufactures	38.0	39.0	37.8	37.6	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.7	40.9	40.7	39.9	40.9	40.6	40.7	40.5	40.5	40.2
Apparel and other textile products	36.8	37.1	36.7	36.3	37.0	37.0	36.9	36.8	36.5	36.6
Paper and allied products	43.2	43.7	43.9	43.3	43.1	43.2	43.4	43.4	43.1	43.3
Printing and publishing	37.7	38.1	38.3	37.6	38.0	37.9	37.8	37.9	37.7	37.9
Chemicals and allied products	42.4	42.6	43.3	42.4	42.3	42.5	42.4	42.3	42.7	42.4
Petroleum and coal products	43.5	44.7	46.2	46.8	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.9	41.3	41.4	41.0	41.7	41.5	41.4	41.2	40.7	40.8
Leather and leather products	37.8	37.5	37.7	37.0	38.0	38.1	37.7	37.5	37.2	37.2
Transportation and public utilities	39.3	39.1	39.2	38.6	39.6	39.5	39.3	39.1	39.2	38.9
Wholesale trade	37.9	38.1	38.2	37.8	38.1	38.1	38.1	38.1	38.0	38.0
Retail trade	28.4	28.6	29.2	28.5	29.1	28.8	29.0	28.8	28.7	29.0
Finance, insurance, and real estate	36.1	35.7	35.7	35.7	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.6	32.6	32.5	32.4	32.7	32.7	32.8	32.6	32.6	32.5

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance; insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficient precision.

p = preliminary.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Jan. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/	Jan. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/
-Total private	$9.54	$9.81	$9.84	$9.89	$329.13	$338.45	$340.46	$338.24
Seasonally adjusted	9.49	9.78	9.83	9.84	330.25	338.39	339.14	340.48
Mining	13.20	13.13	13.34	13.39	557.04	572.47	584.29	589.16
Construction	13.26	13.51	13.66	13.43	483.99	514.73	505.42	506.31
Manufacturing	10.37	10.58	10.66	10.60	425.17	434.84	440.26	430.36
Durable goods	10.90	11.10	11.18	11.04	455.62	460.65	468.44	454.85
Lumber and wood products	8.71	8.99	9.02	8.95	345.79	360.50	362.60	354.42
Furniture and fixtures	8.10	8.40	8.40	8.40	319.14	334.32	337.68	325.44
Stone, clay, and glass products	10.59	10.87	10.87	10.87	439.49	461.98	451.11	448.93
Primary metal industries	12.27	12.51	12.53	12.48	536.20	535.43	540.84	532.90
Blast furnaces and basic steel products	14.04	14.48	14.41	14.34	617.76	622.64	625.39	620.92
Fabricated metal products	10.45	10.61	10.69	10.55	438.90	443.50	450.05	437.83
Machinery, except electrical	11.21	11.48	11.57	11.50	477.55	486.75	497.51	484.15
Electrical and electronic equipment	10.27	10.47	10.52	10.46	422.10	431.36	437.63	427.81
Transportation equipment	13.58	13.85	13.92	13.58	582.58	573.39	592.99	564.93
Motor vehicles and equipment	14.20	14.46	14.50	13.73	619.12	620.33	623.50	565.68
Instruments and related products	10.12	10.36	10.49	10.47	426.99	428.90	439.53	431.36
Miscellaneous manufacturing	8.22	8.49	8.60	8.61	325.05	341.30	344.00	338.57
Nondurable goods	9.62	9.86	9.95	9.99	383.84	398.34	402.98	397.60
Food and kindred products	9.27	9.38	9.47	9.46	369.87	386.46	391.11	380.29
Tobacco manufactures	14.39	15.01	15.46	15.89	546.82	585.39	584.39	594.29
Textile mill products	7.60	7.82	7.86	7.92	309.32	319.84	319.90	316.01
Apparel and other textile products	6.32	6.42	6.45	6.45	232.58	238.18	236.72	234.14
Paper and allied products	11.78	12.08	12.11	12.08	508.90	527.90	531.63	523.06
Printing and publishing	10.73	11.05	11.07	11.14	404.52	421.01	423.98	418.86
Chemicals and allied products	12.85	13.26	13.31	13.40	544.84	564.88	576.32	568.16
Petroleum and coal products	15.24	15.64	15.80	15.96	662.94	699.11	729.96	746.93
Rubber and misc. plastics products	9.32	9.50	9.60	9.71	390.51	394.25	397.44	398.11
Leather and leather products	6.48	6.67	6.73	6.80	244.94	250.13	253.72	251.60
Transportation and public utilities	12.47	12.67	12.70	12.75	490.07	495.40	497.84	492.15
Wholesale trade	10.23	10.55	10.62	10.64	387.72	401.96	405.68	402.19
Retail trade	6.48	6.64	6.66	6.74	184.03	189.90	194.47	190.74
Finance, insurance, and real estate	9.46	9.69	9.76	9.84	341.51	345.93	348.43	351.29
Services	9.25	9.61	9.69	9.77	301.55	313.29	314.93	316.55

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry, seasonally adjusted

Industry	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/	Percent change from: Dec. 1989-Jan. 1990
Total private2/:							
Current dollars	$9.49	$9.74	$9.78	$9.78	$9.83	$9.84	0.1
Constant (1977) dollars3/	4.81	4.81	4.81	4.79	4.80	N.A.	(4)
Construction	13.18	13.39	13.44	13.52	13.62	$13.35	-2.0
Manufacturing	10.33	10.55	10.55	10.57	10.60	10.56	-.4
Excluding overtime5/	10.87	10.08	10.08	10.11	10.14	10.11	-.3
Transportation and public utilities	12.45	12.67	12.68	12.61	12.65	12.74	.7
Wholesale trade	10.19	10.47	10.54	10.54	10.59	10.60	.1
Retail trade	6.44	6.58	6.61	6.61	6.65	6.69	.6
Finance, insurance, and real estate	9.40	9.66	9.77	9.67	9.79	9.77	-.2
Services	9.15	9.49	9.58	9.54	9.62	9.66	.4

1/ See footnote 1, table B-2.

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was 0.2 percent from November 1989 to December 1989, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p/ = preliminary.

ESTABLISHMENT DATA

Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Jan. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/	Jan. 1989	Sept. 1989	Oct. 1989	Nov. 1989	Dec. 1989p/	Jan. 1990p/
Total private	123.9	129.9	130.5	125.7	127.4	128.9	129.2	129.1	128.8	129.6
Goods-producing industries	99.2	104.1	102.1	98.3	103.0	102.8	102.4	102.5	101.2	102.5
Mining	78.8	87.8	87.2	85.5	79.9	85.3	85.5	86.2	85.4	86.9
Construction	122.5	148.6	135.8	129.6	141.2	143.1	143.8	145.8	139.4	149.7
Manufacturing	95.7	96.2	96.3	92.8	96.7	95.8	95.2	94.8	94.5	93.9
Durable goods	94.6	93.2	93.7	90.0	95.2	93.3	92.2	91.9	91.7	90.6
Lumber and wood products	101.8	103.6	102.3	99.4	107.0	103.0	104.2	103.9	103.2	104.5
Furniture and fixtures	113.0	112.9	113.4	108.8	113.8	111.6	109.9	110.2	109.1	109.5
Stone, clay, and glass products	85.7	91.0	86.5	84.2	91.4	88.8	89.6	90.0	87.9	89.8
Primary metal industries	69.4	66.0	66.5	65.3	69.1	66.7	65.9	65.6	65.4	65.2
Blast furnaces and basic steel products	53.8	50.4	51.3	50.6	53.8	51.9	51.1	50.8	51.1	50.7
Fabricated metal products	92.7	90.8	91.1	87.4	93.0	90.0	89.7	89.1	88.6	87.6
Machinery, except electrical	93.4	93.3	95.0	92.8	93.0	93.1	92.0	92.7	92.5	92.3
Electrical and electronic equipment	101.0	98.3	98.4	96.9	100.2	98.0	97.1	96.6	95.3	96.0
Transportation equipment	101.3	94.7	97.7	86.9	101.0	98.5	94.3	92.7	94.9	86.6
Motor vehicles and equipment	91.9	84.9	85.6	68.1	91.8	87.0	84.7	82.3	82.5	68.7
Instruments and related products	115.5	116.5	117.6	115.7	115.3	115.8	116.1	115.2	114.7	115.8
Miscellaneous manufacturing	82.9	89.7	87.2	85.1	85.9	85.8	86.0	86.2	86.3	88.2
Nondurable goods	97.4	100.7	100.1	97.1	98.9	99.7	99.6	99.2	98.7	98.7
Food and kindred products	97.4	108.1	106.0	100.6	101.5	106.2	105.9	105.5	105.4	105.0
Tobacco manufactures	75.9	72.8	72.1	71.4	73.4	69.0	67.6	66.9	65.8	68.7
Textile mill products	79.9	79.8	79.0	76.5	80.6	79.1	79.5	78.8	78.2	77.3
Apparel and other textile products	83.6	85.1	82.9	81.1	84.9	84.5	84.0	83.6	82.1	82.6
Paper and allied products	101.4	103.8	104.3	102.6	101.7	101.9	102.8	102.8	102.2	103.1
Printing and publishing	137.0	140.7	142.1	138.8	138.3	138.7	138.5	139.3	138.9	140.1
Chemicals and allied products	99.2	101.8	103.8	101.1	99.9	101.5	101.8	101.5	102.8	102.1
Petroleum and coal products	78.4	85.8	85.9	85.3	81.2	84.1	85.6	85.3	87.1	88.3
Rubber and misc. plastics products	119.6	118.1	117.3	114.3	119.5	118.4	118.1	116.8	114.8	114.2
Leather and leather products	55.0	53.8	52.9	51.2	56.1	54.8	53.8	53.0	52.1	52.1
Service-producing industries	137.5	144.2	145.9	140.9	140.9	143.5	144.0	143.9	144.0	144.7
Transportation and public utilities	114.0	118.2	120.5	116.8	116.4	116.8	117.4	117.3	119.5	119.1
Wholesale trade	123.5	125.5	128.8	126.7	125.3	127.6	128.0	128.3	128.0	128.7
Retail trade	122.3	129.4	134.4	124.3	127.2	127.5	128.4	128.3	127.5	129.6
Finance, insurance, and real estate	141.0	143.2	143.6	142.3	142.1	143.8	145.0	143.8	143.9	143.8
Services	162.6	171.6	171.3	168.2	166.4	171.4	172.2	172.0	172.4	172.4

1/ See footnote 1, table B-2.

p = preliminary.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonagricultural payrolls, 349 industries1/											
Over 1-month span:												
1988	60.7	63.5	63.8	62.8	61.3	67.2	63.6	58.8	55.4	63.9	68.2	64.6
1989	68.3	60.5	61.8	58.2	55.6	59.7	55.6	57.4	47.9	55.3	60.9	p/52.6
1990	p/59.5											
Over 3-month span:												
1988	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989	71.6	70.1	64.5	61.9	61.6	60.7	61.6	53.4	54.6	55.7	p/57.6	p/60.3
1990												
Over 6-month span:												
1988	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989	75.1	69.5	68.2	66.0	63.8	57.9	57.7	60.2	p/54.6	p/58.2		
1990												
Over 12-month span:												
1988	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989	73.2	73.6	69.6	67.6	66.6	p/63.0	p/63.9					
1990												
	Manufacturing payrolls, 141 industries1/											
Over 1-month span:												
1988	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	62.8	64.9	58.5
1989	62.4	53.5	53.2	49.6	46.8	48.6	49.6	45.4	34.8	52.1	48.2	p/45.7
1990	p/48.2											
Over 3-month span:												
1988	63.1	61.0	62.4	64.9	67.4	67.0	64.5	58.2	62.1	66.7	71.3	79.9
1989	67.4	63.8	55.7	51.8	49.3	48.6	47.9	34.0	41.8	41.5	p/47.5	p/43.3
1990												
Over 6-month span:												
1988	66.3	66.3	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989	69.5	58.5	55.7	52.8	48.9	39.0	40.1	41.8	p/37.2	p/38.7		
1990												
Over 12-month span:												
1988	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989	63.1	63.6	57.1	55.5	49.6	p/44.5	p/45.4					
1990												

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p=preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one- half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. Thank you for your testimony. I notice you referred twice in your statement to the fact that payroll employment rose by 275,000, but that figure may be overstated. And you referred to it again in your closing paragraph.

Why do you say that?

Mrs. NORWOOD. Well, I believe that because of the special weather conditions, very harsh weather in December and milder weather in January, construction employment in particular was affected. Thus, the over-the-month increase reflected the weather rather than economic conditions, and therefore I think that as an economic indicator there was probably too large an estimate of the increase.

The level of employment in these areas, in the industries, is quite correct. The only issue is——

Representative HAMILTON. So you think it is overstated? It was less than those figures would suggest?

Mrs. NORWOOD. I believe so. And in retail trade, since we had a slower employment buildup for the Christmas season, there were fewer workers to be laid off in January.

Representative HAMILTON. A good many people thought that we would have an increase in the unemployment rate, maybe to 5.4 or 5.5 percent in January, and that you would have less job growth than you have identified.

Is it the construction and retail trade that accounted for that increase largely? Are those the sources of strength in the economy?

Mrs. NORWOOD. Construction has been quite weak for the last year or so. The sources of strength in the economy are really services, particularly health services——

Representative HAMILTON. Particularly what?

Mrs. NORWOOD. Health services, where employment continues to grow. We do have an economy that is continuing to add jobs. The only real question is, How many jobs in an individual month?

Representative HAMILTON. Is there anything in the figures at all that suggests that the economy is in a recession, or weakening?

Mrs. NORWOOD. The economy is growing more slowly than it has been. That is quite clear. But we do not see in the employment figures any real declines except in manufacturing, where there are special factors.

So overall, there certainly is no evidence from the employment figures that we are in a downturn.

Representative HAMILTON. Do the figures suggest to you that we are less likely to go into a recession than the figures suggested a few months ago?

Mrs. NORWOOD. I am not sure about that. I know that some people have said that. I just do not make judgments of that kind.

Representative HAMILTON. Now, we had a large number of people dropping out of the labor force in January—about 150,000. Is that an important factor in keeping the unemployment rate at 5.3 percent?

Mrs. NORWOOD. I think in general, over the last year or so, we have had very much slower labor force growth than 5 or 10 years ago. That obviously makes it much easier, and will continue into the late 1990's to make it much easier to maintain a lower unemployment rate, just because of the demographics, really. There are

fewer young people entering the labor force, because of what happened to the birth rate some time ago.

I think we need to look at the labor force statistics on a little longer timeframe. In the month of November, for example, we had a 340,000 increase in the civilian labor force. We had a very small increse in December, only 58,000. Then, a drop of 150,000 in January.

I would average those together, and what it shows is that, for those 3 months—and really, over the whole year—we have had very slow labor force growth.

Representative HAMILTON. Well, you've had people just drop out of the labor force, 150,000 people just dropping out of the labor force. Why did they drop out?

Mrs. NORWOOD. It's partly dropping out, which can include retirement, returning to school, and a lot of other reasons. It's partly also that there were fewer entrants and reentrants. There are three groups: There are those who are there, and leave; then there are the other two groups, entrants, and reentrants, who are coming in in much smaller numbers, if at all. The overall change in the labor force is the net effect of all these movements.

But I think what is happening, clearly, is that some industries are doing well, others are not.

Representative HAMILTON. Is the 150,000 figure an unusual figure? Or, is that fairly normal?

Mrs. NORWOOD. It's a little bit higher than we have had. We have had a couple of months with a 100,000 drop this year. But we did have, in the month of November, a rather large increase. And I think over time what we are seeing overall, is just a slower rate of growth.

I think one of the points we ought to understand from that is that, in the future, in the next 5 years or so, it will be much easier for us to maintain a stable or a relatively lower unemployment rate than in the past, just because there is not going to be a tremendous amount of pressure from labor force increases.

Representative HAMILTON. All segments of the labor market, except adult men, show a decline in the unemployment rate in January. Is that because they found jobs, or is it because they dropped out of the labor force?

Mrs. NORWOOD. I am not sure. In January, we expect a lot of movement among women, because they come into the labor force during the Christmas holidays. They frequently leave the labor force in January.

That did not happen this year. There was an increase in employment of women, and there was some increase in their labor force. So it is a little hard to know.

We do know, of course, as I indicated in my statement, that we had a lot more volatility in the automobile industry than we have had before. There are people on temporary layoff; they are off for a few weeks, then they are called back. And we are finding even in our price measures that the incentives for purchasers to buy cars are put on and then taken off.

And because of the changes in the way in which the auto companies are dealing with the problems of lower supply and perhaps

lower demand, we at BLS are having a little more difficulty in seasonally adjusting the data.

Representative HAMILTON. The real GNP growth during the fourth quarter of 1989 was 0.5 percent. During the third quarter, it was 3 percent, but the unemployment rate was steady during the third and fourth quarters.

What is the explanation for a steady unemployment rate during two periods which have a widely varying growth rate?

Mrs. NORWOOD. I think it is basically the growth in the labor force, compared to the growth in employment. We had over the last year——

Representative HAMILTON. I am sorry, I did not hear that.

Mrs. NORWOOD. I think it really relates to the relationship between the labor force and employment. Over the last year we had an increase in the labor force of about 1,200,000, and we had just about that number of jobs created.

We have had a real downturn in employment in manufacturing industries, especially durable manufacturing. I think that has affected the national accounts a great deal, because many of the durable manufacturing products' counts have not been as great as it has been before.

Representative HAMILTON. We had an acceleration of inflation in the fourth quarter, 5.2 percent annual rate. That is up from 1.6 percent in the third quarter. What was the cause of the acceleration?

Mr. DALTON. It is essentially energy and food in the fourth quarter.

Representative HAMILTON. Energy and food prices?

Mr. DALTON. Yes.

Representative HAMILTON. Now, we have the administration and the CBO and the Blue Chip consensus all projecting that the inflation rate is going to slip back to just over 4 percent in 1990. Is that likely, or possible, given that 5.2 percent annual rate for the fourth quarter last year?

Mrs. NORWOOD. Almost anything is possible.

Representative HAMILTON. Is it likely?

Mrs. NORWOOD. I do not really know. We have found that food prices are very much affected by the weather. In December, we had very, very bad weather, and we have not yet fully experienced the price increases that might result from that, in particular for fruits and vegetables that are produced in some of the southern areas of the country.

Energy, gasoline prices, and home heating oil, and other energy products tend to be quite volatile. We have seen that over recent years, when we have had large increases and large reductions.

I believe there is an adequate supply of energy, as we understand it, at the moment. If you look at all items, excluding food and energy, you get about a 4.4 percent rate of increase over all of 1989. That is a significant rate of increase, and it excludes food and energy. When we look at the underlying rate of inflation, I think we need to take out these very volatile items, although they are extremely important to family consumption.

Representative HAMILTON. You get very, very cold weather in December, and prices on energy jump way up. Is that really basically what happens?

Mrs. NORWOOD. I understand that the Congress has been looking into the prices of home heating oil. And as I said before, we would expect that normally, after freezing weather in places like Florida, that the prices of some of the fresh fruits and vegetables and orange juice, things of that sort, might well go up. That has happened in the past, at least.

We have not seen that yet, because we have not seen the effects of the bad December weather in the fruit and vegetable markets yet.

Representative HAMILTON. Senator Sarbanes.

Senator SARBANES. Thank you very much, Mr. Chairman.

Commissioner, we are pleased to welcome you and your associates here this morning.

What is the status of the BLS budget for fiscal 1991?

Mrs. NORWOOD. We have an increase, a fairly sizable increase, in our 1991 budget. Is that what you were after?

Senator SARBANES. Yes.

Mrs. NORWOOD. About $11 million of that, $10½ million, is in mandatory increases over which we have no control. Things like mail, telephone, travel, and so on.

There is a $4.3 million increase in our budget to pay for the costs of installation of wiring and telephone and other kinds of installations that are necessary for having BLS consolidated in one place toward the end of 1992, in the Old Post Office Building that is next to Union Station.

We have been in four different buildings, and much of our operation is in the GAO Building. GAO owns that building and needs the space. So that is an absolute necessity. It is not program related. I am pleased to have it, because we need it, but it is not program related.

If you look at program funding, what we have had is both increases and decreases. We have had a $2 million increase, which resulted from Michael Boskin's initiative to try to improve economic indicators. We have a half-million dollar increase that is the next step in the multiyear redesign of the labor force survey.

And then, we had nearly $2 million, around $1,800,000, in restoration of the Gramm-Rudman-Hollings cut that occurred in 1990, which we took by deferring a lot of sampling and other things.

So we have had program increases of nearly $4½ million. We have had program decreases—one is a planned phaseout with the completion of the SIC revision. That is about $1½ million, and that is what we had planned anyway.

Then, we have a $6 million decrease, which is the elimination of the mass layoff program. So we have $4.3 million in program increases, and $7½ million in program decreases. So we have a net program change of minus a little over $3 million.

I do have to say that the $4.3 million for the building is certainly something that is essential. I do not consider it program related, but it is there as part of our budget.

Senator SARBANES. Why is the mass layoff program being eliminated?

Mrs. NORWOOD. It is being eliminated largely because we had to operate within certain budget constraints. That being the case, we needed to operate and find ways both to accept the increases and to eliminate some costs.

The mass layoff program was one which was begun before the Congress passed the requirement for notification to workers, and that has certain elements attached to it, including a clear indication of the responsibility of local governments in that area.

In addition, we have built a system within each of the States, and we are in the process of improving that system, so that if any of the individual States wish to continue the program with their own funding, the system is there for them.

But apart from that, the issue really is, where do you cut, when there are budget constraints? And it seemed better, under those circumstances, to eliminate a program like the mass layoff program, where we do still have the extra supplement to the current population survey, so that we can follow what is happening, and not take the cuts in ways which would reduce samples in important indicators like the Consumer Price Index or our other price indexes, or reduce the number of households in the labor force survey, and so on.

Senator SARBANES. Was the decision to eliminate that program a decision that the BLS made?

Mrs. NORWOOD. The decision that it should be taken there was mine, yes. Within the budget constraints within which we had to operate. And as I have said, the alternatives were I thought very damaging to the quality of the data that we produce.

Senator SARBANES. I am not clear from your answer whether the information is now going to be lost, or whether it is going to be provided from another source?

Mrs. NORWOOD. I do not think it is clear what will happen. We know that we have information. For example, we reported this morning on layoffs in the automobile industry. We know that we can continue to follow information of that kind. We know that we have every other year now a supplement to the CPS that is funded by ETA—it is not in our budget, but it is funded by ETA—which gives us a good deal of information about the demographic characteristics of people who are involved in plant closedowns.

We know that the law that was recently passed by the Congress requires employers both to inform workers of imminent plant closedowns, and to report that information to the State authorities. We also know that we have built computer systems in each of the States that are now there, and whether the States will decide to continue that processing or not without our funding, I do not know.

Senator SARBANES. If you were to be given an additional $6 million at this point, would you reinstitute this program? Or, would you use that $6 million in other ways?

Mrs. NORWOOD. I would be inclined to try to find a way to use some of it at least to continue in some of the major States this program, and to use some of the rest of it to improve in particular the business survey's first closing estimates.

Senator SARBANES. So in terms of your priorities, this remains next in line? In other words, if there were additional money you would not have other more pressing priorities so that this program

would still not be reached? You would restore this program on the next allocation of money, if you had such an allocation? Is that correct?

Mrs. NORWOOD. I would certainly consider it very seriously. I should point out to you that this program was conceived originally as a national program. But we have not been able to get all 50 States to participate in it, even with our present funding.

In particular, we have had difficulties with the funding that is necessary for the State of California, which has a different kind of system, and it would cost a great deal more.

In addition, we were concerned that we have a limited amount of money for the program, and that the cost to the program really shifts, depending upon how many workers there are affected, or more importantly how many plant closings there might be; and that we might be faced with a situation where we really could not support the program.

Senator SARBANES. Mr. Chairman, I just have one or two more questions, if I may.

What was the percentage increase in your budget? I know you listed the different items, but just taking it in total.

Mrs. NORWOOD. Well, we have a base budget of about $240 million. And we have had total increases of about $19 million. So it is a little under 10 percent.

Senator SARBANES. That is more than inflation. But $11 million of the $19 million were for mandated increases over which you had no control. Is that correct?

Mrs. NORWOOD. That is right. And, of course, we had that $7½ million in decreases, so our net budget increase was only $11.5 million. Then, this just happens to be the year when we needed a little over $4 million in order to begin preparing the building, so that we would not be out on the street, which I think is quite important.

Senator SARBANES. I would agree with that. Is everything going to be consolidated into the Old Post Office Building?

Mrs. NORWOOD. Yes.

Senator SARBANES. That will be your home, in effect?

Mrs. NORWOOD. That is the current plan.

Senator SARBANES. Do you have the whole building?

Mrs. NORWOOD. Almost. I believe that in the basement there will be the Capitol Architect, and there will be a small museum of the post office. But we will have most of the building, about 98 percent or 97 percent.

Senator SARBANES. The Capitol Architect is going to be in the basement?

Mrs. NORWOOD. I am not sure about that.

Senator SARBANES. Let me give you a word of advice. You had better set a dynamic into place which assures that you rather than he ends up getting the building.

Mrs. NORWOOD. The plan is for BLS to have that building.

Senator SARBANES. I invite you to look at what is happening over in the Capitol. If he is in it, you may be out of it, over time. Just a word of advice.

Mrs. NORWOOD. I appreciate the advice.

Let me just say that I have been Commissioner of BLS since 1979, and I set out in 1979 to try to consolidate us in one building,

to get some appropriate space. And I do have to tell you that I have not been terribly successful up to this point, and that I will believe this consolidation when it actually takes place.

Senator SARBANES. We are very much for it happening, and that is a nice building.

Mrs. NORWOOD. Yes. And it is close to the Congress, which we think is quite important for us. We do a lot with Congress, as you know.

Senator SARBANES. So does the Congress. In program terms, though, in effect you are taking a dollar cut?

Mrs. NORWOOD. Yes.

Senator SARBANES. It is not a matter simply of lagging behind inflation. You are actually taking a cut in dollar terms. Is that correct?

Mrs. NORWOOD. That is correct.

Senator SARBANES. Well, we are going to have Mr. Boskin up here at some point, I think next week, and we will have a broad range of things to cover with him. I certainly will touch on them, and I hope we will be able to get him back for a hearing devoted just to the funding of the Federal statistical agencies.

Thank you very much.

Mrs. NORWOOD. I do want to say, Senator, that Mr. Boskin has been very supportive of the need for improving the quality of the economic statistics, and that his group has defined economic statistics. And that does not include all of the programs that we have.

Senator SARBANES. Do you have the same perception of Mr. Darman and his associates at OMB?

Mrs. NORWOOD. I do not have very much to do with OMB. That is handled by the Department of Labor.

Representative HAMILTON. You frequently will have at these hearings a number of people from other countries who are in training sessions. Do you train any of the Eastern European statisticians?

Mrs. NORWOOD. We are moving into that pretty rapidly.

Tom Plewes and Ken Dalton both will be leaving for Warsaw early in March. Ed Dean, who also is here, has already been to Warsaw to discuss with Polish governmental representatives what kind of help they need, and to review the statistical system with them.

There is some work going on in Hungary, and we have had other requests. I have received an invitation from the Soviet Union to go there to discuss consumer price index methodology.

Representative HAMILTON. Do you have any judgment about the current quality of the employment and unemployment statistics in those countries?

Mrs. NORWOOD. Yes, I do. I believe that there is a need for more data than they have, and for more credible data than perhaps exists.

I think the big problem is in the price area.

Representative HAMILTON. Would you call their statistics in general on employment and unemployment reliable, or unreliable?

Mrs. NORWOOD. I think they have a very capable group of statisticians. But I do not know enough about the specific data to be certain. A lot of it is reported to statistical agencies, which at the

same time have some regulatory functions. That always raises a question in my mind about conflicts of interest.

I think there is a very real intent to improve those data, and we certainly want to be as helpful as we can. Tom Plewes and I recently were in Paris for an OECD meeting, and while there we went to Luxembourg to talk with the secretariat of the European Community responsible for statistics. And we will be cooperating closely with them in their assistance to the countries of Eastern Europe.

Representative HAMILTON. You understand, I am sure, that with the bill that was enacted last year, and other bills that are in process now, the Congress will have a growing interest in the reliability of economic data from those countries.

Mrs. NORWOOD. Yes, indeed.

Representative HAMILTON. Let me just ask a question or two about the October Monthly Labor Review article on the working poor.

What percent of poor families have someone in the family who is working in the labor force?

Mrs. NORWOOD. Well, we have this article here. And in a moment——

[Pause.]

Mrs. NORWOOD. We will have to search for it and come back to it. Sorry.

Representative HAMILTON. Is it your impression that the most important cause of poverty among workers was low wages?

Mrs. NORWOOD. It is partly low wages. It is partly part-year work. And this article, of course, focused on a particular group, those who had had 6 months in the labor force. But it is partly that people work at jobs, and often do not work year round.

Representative HAMILTON. Does it sound right that 75 percent of working poor families had only one earner?

Mrs. NORWOOD. It could be. We will have the number for you. We will supply it for the record.

[The following information was subsequently supplied for the record:]

That is correct. About 75 percent of working poor families had only one working member.

Representative HAMILTON. Do your statistics show any change for example as a result of the increase in the minimum wage? Would that be reflected in those statistics?

Mrs. NORWOOD. It certainly will be in our wage data in several ways. We would expect to see it in the employment cost index and in our area and industry wage survey as it takes place. There may also be some effect in terms of, if you raise the bottom, the whole range of wages may change. And we will be taking a look at that.

Representative HAMILTON. You are familiar with this study by Mr. Levitan and Mr. Gallo on work force statistics, I presume?

Mrs. NORWOOD. Yes, I am.

Representative HAMILTON. Would you comment on their conclusions? They say that the budget cuts of the 1980's hurt the quality of Federal statistics, not by reducing the quality of current data, but by undercutting the ability of the agencies to modernize, innovate, and keep up with the times.

Basically, that was their principal conclusion. Do you agree with that?

Mrs. NORWOOD. That is one of their main conclusions. Yes. I believe that in any period of budget constraint, it is very hard to do the work that is necessary to keep the system up in the future, and that essentially what we do is borrow on the future.

I do not think there is any doubt about that. I believe that every agency in the statistical system has said that.

Representative HAMILTON. Now, when you compute the monthly unemployment rate, your sample is smaller than it was, say, in 1980.

Mrs. NORWOOD. Yes.

Representative HAMILTON. You used to sample 71,000 households. You now sample 55,800.

When you get a cut in the sample size, how does that affect the data?

Mrs. NORWOOD. Here is one place where I disagree with Mr. Levitan. It is true that the sample size of the labor force survey is smaller, but the survey has been redesigned in order to make that sample much more efficient.

And though it would have been nice to have kept the additional households and had even greater efficiency, we are really not any worse off by having the survey with a few fewer households, since we have redesigned it.

During the 1970's, in order to assist in the development of local data from the labor force survey, we added samples, and we added it in a way which really make the samples somewhat inefficient, because we could not redesign the whole thing.

Representative HAMILTON. He recommends a survey of 120,000 households.

Mrs. NORWOOD. Yes. And we have plans in the next redesign to try to do that.

I might say that there are tradeoffs here. It is not at all clear whether it is better to develop data so that every State has a monthly estimate with some fairly high variability surrounding it, or whether it is better to put that effort into getting far better data on Hispanics and on other minorities.

Representative HAMILTON. Do you have any judgment about his comment on the Census Bureau? He says that almost half of their interviewers leave within a year, and that the Census Bureau provides only minimal training to new employees.

Mrs. NORWOOD. Let me just say that I believe that that is a rather strong statement, that half their interviewers leave during the year.

It is true that all statistical agencies today are having more and more trouble, one, attracting good people to come to work for us and keeping them, and two, in particular in household surveys, in getting people who are willing to work in areas that may not be among the safest in the country.

The Census Bureau has, however, a significant training program for its workers. I always would like to see them give more training, but I do not think it is true that they have really eliminated or sharply reduced training.

Certainly, there has been some cutbacks in training, as a result of budget constraints; but I do not believe the training has become to be dangerously inadequate. I do think that one of the issues that we do need to look at, and that we in the Census Bureau are looking at for the future, is, what kind of training is the best training for interviewers who are going into households today, or into business establishments today? I think there is a lot to be done in that area.

Representative HAMILTON. You also, according to this study, have a very high percentage of households who just do not answer. And that has climbed rapidly. It is almost one in four now, and it was only 5 percent in 1948. So you have an awful lot of people who are just not responding. Is that right?

Mrs. NORWOOD. One of the things that I have learned is that everyone defines "not respond" somewhat differently. You can get all kinds of numbers.

Let me just say that it is true that it is becoming more difficult to collect data, both from businesses and from households. And part of the reason is because people's attitudes toward their government has changed. So that is one kind of problem.

It takes a lot of work, we have found, to convince people to cooperate. I think the Census Bureau does a pretty good job of that. I know that we have worked very hard in the areas where we collect data from households, and also from business establishments, to work at that and to work with the establishments from whom we collect data in order to help them to use the data that are collected. And budget constraints of course have had some effect on our regional offices' ability to do very much of that.

Most of the nonresponse in the labor force survey is spotty. That is, there are problems in certain areas, and there are also some questions. There is greater nonresponse, for example, on income questions than there is on labor force questions. So it is differential nonresponse.

Representative HAMILTON. As you know we have the Treasury Secretary joining us here in a few minutes.

I thank you and your colleagues for your appearance this morning. The committee will stand adjourned.

Mrs. NORWOOD. Thank you.

[Whereupon, at 10:15 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, MARCH 9, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room 2203, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representative Hamilton.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

The committee is meeting today to examine the data on the employment and unemployment situation for February which were released this morning by the Bureau of Labor Statistics.

We are very pleased to welcome Commissioner Norwood back before the committee, along with her colleagues from BLS.

In recent weeks, various economic statistics have provided conflicting pictures of the economic outlook.

On the positive side, housing starts and building permits rose very stongly in January and there was an unexpectedly large increase in retail sales.

More neutral was the latest index of leading indicators which anticipates no change in the economy either up or down.

On the negative side, new orders for durable goods were down 10.5 percent in January and new orders for all manufactured goods were down 5.4 percent, the biggest 1-month drop in 15 years.

There's also disappointing news for U.S. car manufacturers. Domestic car sales last month were at their lowest level for a February since 1983.

Employment and unemployment data are among the first official information available each month on the economy and we hope the February figures will shed some light on the economic outlook.

The committee will now turn to Commissioner Norwood for her testimony on the employment and unemployment situation in February.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY PAUL A. ARMKNECHT, ASSISTANT COMMISSIONER, OFFICE OF CONSUMER PRICES AND PRICE INDEXES; AND JOHN E. BREGGER, ASSISTANT COMMISSIONER, OFFICE OF CURRENT EMPLOYMENT ANALYSIS

Mrs. NORWOOD. Thank you very much, Mr. Chairman.

Mr. Plewes and Mr. Dalton, who usually attend these hearings with me, are very busy providing technical assistance to the central statistical agency of Poland this week. And in their places, I have with me our professionals in this area, Mr. Jack Bregger on my left, who is our Assistant Commissioner for Current Employment Analysis; and on my right is Paul Armknecht, who is our Assistant Commissioner for Consumer Prices.

We are all very pleased to be here this morning.

The number of payroll jobs increased in February, and unemployment remained essentially the same as it has been since late in 1988. The overall jobless rate, reflecting the Armed Forces, remained at 5.2 percent; the civilian worker rate was 5.3 percent for the 9th consecutive month.

As in the prior 2 months, special factors played a role in February's 370,000 increase in payroll jobs. The over-the-month increase of 90,000 factory jobs resulted from the return from layoff of workers in the automobile and related fabricated metal industries. In January and in February, auto companies used temporary layoffs and recalls as the mechanism to balance inventories with reduced consumer demand. These large employment swings stand in contrast to the previous year's pattern in which automobile companies reduced employment more gradually. The number of jobs in the auto industry is down nearly 50,000 from a year ago.

Very little change occurred elsewhere in durable manufacturing from January to February. In the nondurable goods sector, textiles, apparel, and rubber and plastics all continued to experience declines.

Construction employment again benefited from record-breaking warm weather during the survey week. As a result, more than the usual amount of construction activity took place, and, on a seasonally adjusted basis, there was an increase of 60,000 jobs over the month. It is possible, however, that the higher than usual activity in the beginning months of the year could result in fewer new hires during the traditional spring construction buildup.

Job growth in the service-producing sector continued, with the number of jobs in the services industry itself up 145,000 in February. Employment gains occurred in health and business services as well as in other parts of the services industry. Employment was also up in the transportation industry and in finance, insurance, and real estate.

Little over-the-month change occurred in the number of jobs in government. The level of Federal Government employment in both January and February included some 20,000 workers hired by the Census Bureau to prepare for the decennial census. Several hundred thousand additional workers are expected to be added in the

next few months as activities on the 1990 census of population expand.

In summary, special circumstances led to an unusually large employment increase in February. The number of factory jobs was up, but this increase reflected the return to work of automobile workers who had previously been temporarily laid off. Employment in the services industry continued to grow, and the construction industry once again benefited from unusually mild winter weather. Unemployment remained about where it has been for the past year and a half.

Mr. Chairman, earlier this week, we issued revised productivity and cost measures to reflect revisions in the national accounts. They show small productivity gains in major sectors of the economy during the fourth quarter of 1989 and for the year as a whole. Last year's productivity increase for the business sector, at 1.1 percent, was the smallest since 1982. Following the pattern of recent years, productivity rose more rapidly in manufacturing than in the larger business sector.

We know that the business cycle has a strong effect on productivity, and we have noted in the past that smaller gains tend to occur as the expansion phase of the cycle becomes longer. The United States is now in the 29th quarter of the expansion phase of the current cycle, wich is the longest peacetime expansion in the modern record. The smaller productivity gains of the fourth quarter of last year and of 1989 as a whole are consistent with this pattern.

A related factor is that unit labor costs rose. The BLS Employment Cost Index shows that compensation costs to employers also rose; the benefit portion of those costs went up about 6 percent in 1989.

Smaller rates of productivity growth are sometimes associated with inflationary pressures. As you know, prices moved up sharply in January, largely due to a runup in the energy and food indexes. In the CPA, increases also occurred in a number of consumer services, including airline and other transit fares, tuition, licensing fees, and hotel room rates. Some of these price increases, especially food and energy, are clearly affected by weather; others are once a year phenomena. When we issue the February price indexes over the past 2 weeks, we will get a better indication of current price trends.

Mr. Chairman, we would be glad to answer any questions you have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989									
February	5.6	5.2	5.2	5.2	5.2	5.2	5.1	5.2	.1
March	5.2	5.0	5.0	5.0	5.0	5.0	5.0	5.0	-
April	5.1	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
May	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.1	.1
June	5.5	5.3	5.3	5.3	5.2	5.3	5.3	5.3	.1
July	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
August	5.1	5.3	5.3	5.3	5.2	5.3	5.2	5.2	.1
September	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.4	.1
December	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4	.1
1990									
January	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	.1

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
March 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonall adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolate factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: FEBRUARY 1990

Employment rose and unemployment held steady, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate was 5.2 percent and the civilian worker rate was 5.3 percent. These have changed very little in the last year and a half.

Payroll employment, as measured by the survey of nonfarm business establishments, rose by about 370,000 in February, on a seasonally adjusted basis, to 110.3 million. The large increase reflected the return of temporarily laid-off workers in automobile manufacturing, milder-than-normal weather which aided construction activity, and continued strength in services. Total civilian employment, as measured by the household survey, rose slightly in February.

Unemployment (Household Survey Data)

The number of unemployed persons was about unchanged in February at 6.6 million, seasonally adjusted. The civilian worker unemployment rate, at 5.3 percent, has been the same for 9 consecutive months. (See table A-2.)

The jobless rate for blacks dropped to 10.5 percent in February, reflecting improvement among adult black men. Jobless rates for other major worker groups--adult men (4.6 percent), adult women (4.8 percent), teenagers (14.8 percent), and whites (4.6 percent)--were about unchanged. (See tables A-2 and A-3.) The unemployment rate for auto workers, which had soared to 20 percent in January because of temporary plant shutdowns, fell back to 8 percent in February.

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment edged up in February to 118.0 million, seasonally adjusted, and the employment-population ratio was essentially unchanged at 63 percent, about where it has held for the past year.

The civilian labor force (124.6 million) also rose by a small amount over the month, and the labor force participation rate (66.5 percent) was little changed. Over the past year, the labor force has increased by 1.5 million, with the participation rate remaining relatively steady around the 66-percent mark. (See table A-2.)

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Jan.-Feb. change
	1989		1989	1990		
	III	IV	Dec.	Jan.	Feb.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/	125,720	126,098	126,246	126,094	126,308	214
Total employment 1/	119,153	119,474	119,588	119,560	119,713	153
Civilian labor force	124,035	124,394	124,546	124,397	124,630	233
Civilian employment	117,468	117,770	117,888	117,863	118,035	172
Unemployment	6,567	6,624	6,658	6,535	6,594	59
Not in labor force	62,567	62,624	62,619	62,896	62,782	-114
Discouraged workers	817	827	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/	5.2	5.3	5.3	5.2	5.2	.0
All civilian workers	5.3	5.3	5.3	5.3	5.3	.0
Adult men	4.6	4.6	4.6	4.7	4.6	-0.1
Adult women	4.7	4.8	4.8	4.6	4.8	.2
Teenagers	15.0	15.2	15.2	14.5	14.8	.3
White	4.5	4.5	4.6	4.5	4.6	.1
Black	11.3	11.8	11.8	11.3	10.5	-.8
Hispanic origin	8.6	8.1	8.5	7.1	7.8	.7
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment	108,917	109,398	109,570	p109,902	p110,274	p372
Goods-producing	25,659	25,581	25,532	p25,513	p25,664	p151
Service-producing	83,258	83,816	84,038	p84,389	p84,610	p221
	Hours of work					
Average weekly hours:						
Total private	34.7	34.6	34.5	p34.5	p34.6	p.1
Manufacturing	41.0	40.7	40.6	p40.7	p40.7	p.0
Overtime	3.8	3.7	3.6	p3.7	p3.6	p-.1

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

Industry Payroll Employment (Establishment Survey Data)

Total payroll employment rose by 370,000 in February, after seasonal adjustment, to a level of 110.3 million. The gain reflected a rebound in auto employment, favorable weather for construction and other outdoor activities, and strong increases in services. (See table B-1.)

Manufacturing employment increased by 90,000 in February, seasonally adjusted, following steady declines over the past year. The gain resulted from the recall of workers in the auto industry, as many plants reopened after January shutdowns. A related rebound took place in fabricated metals employment, which was up by 10,000 over the month, after declining by 20,000 in the prior month. Otherwise, factory employment was weak, as evidenced by the diffusion index of employment change that was below 50 percent for the fourth straight month. Weakness was particularly apparent in nondurables, where declines occurred in six industries, including textiles, apparel, and rubber and plastics. (See tables B-1 and B-6.)

Elsewhere in the goods-producing sector, construction employment rose by 60,000, after seasonal adjustment, as the unusually mild weather experienced in January continued into the February reference period, leading to fewer layoffs than usual for the second month in a row. Mining employment was about unchanged in February; the industry has added 40,000 jobs since last July.

In the service-producing sector, the services industry added 145,000 jobs for the second straight month, after seasonal adjustment, which were broadly distributed among the various component industries, such as health, business, personal, and social services. Smaller increases occurred in transportation and public utilities (20,000) and finance, insurance, and real estate (15,000). Trade employment was little changed in February.

Weekly Hours (Establishment Survey Data)

The workweek for production or nonsupervisory workers on private nonfarm payrolls edged up 0.1 hour in February to 34.6 hours, seasonally adjusted. The average workweek in manufacturing was unchanged at 40.7 hours, and factory overtime moved down 0.1 hour to 3.6 hours. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers rose by 0.7 percent in February to 130.3 (1977=100), after seasonal adjustment. The index for manufacturing, at 94.4, also rose 0.7 percent, reversing a similar decline in January. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls increased by 0.5 percent in February, seasonally adjusted, after showing little movement in January. Average weekly

earnings rose by 0.8 percent. Before seasonal adjustment, average hourly earnings increased 3 cents to $9.90, and average weekly earnings rose $2.02 to $339.57. Over the year, both hourly and weekly earnings increased by 3.7 percent. (See tables B-3 and B-4.)

The Employment Situation for March 1990 will be released on Friday, April 6, at 8:30 A.M. (EDT).

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January-June period and again for the July-December period. For the establishment survey, updated factors for seasonal adjustment are calculated for 6 months, along with the introduction of new benchmarks, which are discussed at the end of the next section, and again with the release of data for October. In both surveys, revisions to data published over the previous 5 years are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error, that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20204. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
TOTAL									
Noninstitutional population[2]	187,461	188,990	189,090	187,461	188,580	188,721	188,865	188,990	189,090
Labor force[3]	123,580	124,990	125,120	124,901	125,857	126,192	126,246	126,004	126,308
Participation rate[4]	65.9	66.1	66.2	66.6	66.7	66.9	66.8	66.7	66.8
Total employed[5]	116,707	117,734	117,966	118,441	119,294	119,540	119,589	119,580	119,713
Employment-population ratio[6]	62.3	62.3	62.4	63.2	63.3	63.3	63.3	63.3	63.3
Resident Armed Forces	1,684	1,697	1,678	1,684	1,709	1,704	1,700	1,697	1,678
Civilian employed	115,023	116,037	116,308	116,757	117,585	117,836	117,889	117,883	118,035
Agriculture	2,795	2,720	2,693	3,196	3,197	3,160	3,197	3,134	3,079
Nonagricultural industries	112,228	113,317	113,615	113,561	114,388	114,676	114,691	114,728	114,957
Unemployed	6,883	7,256	7,134	6,360	6,563	6,652	6,658	6,535	6,594
Unemployment rate[7]	5.6	5.8	5.7	5.1	5.2	5.3	5.3	5.2	5.2
Not in labor force	63,871	64,000	63,970	62,660	62,723	62,529	62,619	62,896	62,782
Men, 16 years and over									
Noninstitutional population[2]	89,973	90,772	90,822	89,973	90,535	90,606	90,678	90,772	90,822
Labor force[3]	68,273	68,844	68,885	69,033	69,599	69,635	69,725	69,539	69,639
Participation rate[4]	75.9	75.8	75.8	76.7	76.9	76.9	76.9	76.6	76.7
Total employed[5]	64,233	64,802	64,799	65,529	66,046	66,011	66,143	65,943	66,106
Employment-population ratio[6]	71.4	71.2	71.3	72.8	73.0	72.9	72.9	72.6	72.8
Resident Armed Forces	1,521	1,523	1,506	1,521	1,533	1,529	1,525	1,523	1,506
Civilian employed	62,712	63,079	63,293	64,008	64,513	64,482	64,618	64,420	64,602
Unemployed	4,040	4,242	4,087	3,504	3,553	3,624	3,582	3,597	3,530
Unemployment rate[7]	5.9	6.2	5.9	5.1	5.1	5.2	5.1	5.2	5.1
Women, 16 years and over									
Noninstitutional population[2]	97,488	98,218	98,268	97,488	98,045	98,115	98,187	98,218	98,268
Labor force[3]	55,317	56,145	56,235	55,768	56,258	56,557	56,521	56,555	56,669
Participation rate[4]	56.7	57.2	57.2	57.2	57.4	57.6	57.6	57.6	57.7
Total employed[5]	52,474	53,132	53,166	52,912	53,248	53,529	53,445	53,617	53,606
Employment-population ratio[6]	53.8	54.1	54.1	54.3	54.3	54.6	54.4	54.6	54.5
Resident Armed Forces	163	174	172	163	176	175	175	174	172
Civilian employed	52,311	52,958	53,016	52,749	53,072	53,354	53,270	53,443	53,433
Unemployed	2,843	3,014	3,047	2,856	3,010	3,028	3,076	2,938	3,064
Unemployment rate[7]	5.1	5.4	5.4	5.1	5.4	5.4	5.4	5.2	5.4

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
TOTAL									
Civilian noninstitutional population	185,777	187,293	187,412	185,777	186,671	187,017	187,185	187,293	187,412
Civilian labor force	121,906	123,293	123,442	123,117	124,148	124,486	124,548	124,397	124,630
Participation rate	65.6	65.8	65.9	66.3	66.4	66.6	66.5	66.4	66.5
Employed	115,023	116,037	116,308	116,737	117,585	117,836	117,998	117,963	118,035
Employment-population ratio[2]	61.9	62.0	62.1	62.8	62.9	63.0	63.0	62.9	63.0
Unemployed	6,883	7,256	7,134	6,380	6,563	6,652	6,550	6,535	6,594
Unemployment rate	5.6	5.9	5.8	5.2	5.3	5.3	5.3	5.3	5.3
Men, 20 years and over									
Civilian noninstitutional population	81,256	82,198	82,248	81,256	81,905	81,985	82,055	82,189	82,248
Civilian labor force	63,031	63,664	63,760	63,393	63,919	63,967	64,071	63,959	64,101
Participation rate	77.6	77.5	77.5	78.0	78.0	78.0	78.1	77.8	77.9
Employed	59,681	60,042	60,288	60,596	61,026	61,033	61,154	60,976	61,172
Employment-population ratio[2]	73.4	73.1	73.3	74.5	74.5	74.5	74.5	74.2	74.4
Agriculture	2,065	2,540	2,015	2,112	2,304	2,292	2,293	2,269	2,254
Nonagricultural industries	57,619	58,502	58,270	58,254	58,722	58,741	58,861	58,706	58,918
Unemployed	3,350	3,612	3,474	2,827	2,892	2,934	2,917	2,983	2,929
Unemployment rate	5.3	5.7	5.4	4.5	4.5	4.6	4.6	4.7	4.6
Women, 20 years and over									
Civilian noninstitutional population	90,153	91,091	91,157	90,153	90,660	90,852	91,042	91,091	91,157
Civilian labor force	51,675	52,575	52,686	51,816	52,291	52,541	52,586	52,686	52,814
Participation rate	57.3	57.7	57.8	57.5	57.5	57.8	57.8	57.8	57.9
Employed	49,279	50,025	50,129	49,486	49,796	50,043	50,048	50,256	50,297
Employment-population ratio[2]	54.7	54.9	55.0	54.9	54.8	55.0	55.0	55.2	55.2
Agriculture	578	513	534	648	641	624	618	594	582
Nonagricultural industries	48,702	49,512	49,603	48,809	49,155	49,419	49,430	49,661	49,704
Unemployed	2,396	2,550	2,540	2,361	2,495	2,498	2,538	2,431	2,527
Unemployment rate	4.6	4.9	4.9	4.6	4.8	4.8	4.8	4.6	4.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,367	14,034	14,008	14,367	14,107	14,097	14,087	14,034	14,008
Civilian labor force	7,199	7,069	6,993	7,908	7,949	7,980	7,889	7,752	7,715
Participation rate	50.1	50.3	49.9	55.0	56.3	56.6	56.1	55.2	55.1
Employed	6,062	5,870	5,882	6,736	6,783	6,780	6,696	6,831	6,577
Employment-population ratio[2]	42.2	42.5	42.1	46.9	47.8	48.0	47.5	47.3	47.0
Agriculture	152	167	154	238	252	244	286	270	243
Nonagricultural industries	5,910	5,903	5,740	6,498	6,511	6,516	6,400	6,561	6,334
Unemployed	1,137	1,199	1,100	1,172	1,166	1,220	1,203	1,121	1,139
Unemployment rate	15.8	15.5	15.7	14.8	14.9	15.3	15.2	14.5	14.8

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

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Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
WHITE									
Civilian noninstitutional population	158,947	159,938	160,007	158,947	159,644	159,736	159,832	159,938	160,007
Civilian labor force	104,758	105,906	106,113	105,760	106,618	106,834	106,896	106,864	107,080
Participation rate	65.9	66.2	66.3	66.5	66.8	66.9	66.9	66.8	66.9
Employed	99,747	100,419	100,689	101,187	101,862	101,991	102,032	102,074	102,117
Employment-population ratio[2]	62.8	62.8	62.9	63.7	63.8	63.8	63.8	63.8	63.8
Unemployed	5,012	5,486	5,425	4,573	4,756	4,843	4,864	4,811	4,962
Unemployment rate	4.8	5.2	5.1	4.3	4.5	4.5	4.6	4.5	4.6
Men, 20 years and over									
Civilian labor force	54,920	55,464	55,554	55,217	55,626	55,676	55,747	55,771	55,815
Participation rate	78.0	78.0	78.1	78.4	78.5	78.5	78.5	78.4	78.4
Employed	52,399	52,703	52,851	53,105	53,483	53,482	53,580	53,560	53,547
Employment-population ratio[2]	74.4	74.1	74.3	75.4	75.5	75.4	75.5	75.3	75.2
Unemployed	2,521	2,761	2,703	2,112	2,143	2,194	2,167	2,211	2,268
Unemployment rate	4.6	5.0	4.9	3.8	3.9	3.9	3.9	4.0	4.1
Women, 20 years and over									
Civilian labor force	43,657	44,379	44,513	43,782	44,207	44,360	44,469	44,475	44,615
Participation rate	56.8	57.2	57.4	56.9	57.1	57.3	57.4	57.4	57.5
Employed	42,008	42,504	42,654	42,137	42,437	42,586	42,641	42,718	42,782
Employment-population ratio[2]	54.6	54.8	55.0	54.8	54.9	55.0	55.0	55.1	55.2
Unemployed	1,649	1,875	1,860	1,625	1,770	1,774	1,828	1,757	1,833
Unemployment rate	3.8	4.2	4.2	3.7	4.0	4.0	4.1	4.0	4.1
Both sexes, 16 to 19 years									
Civilian labor force	6,182	6,063	6,046	6,781	6,785	6,798	6,680	6,639	6,650
Participation rate	53.0	53.6	53.7	58.2	59.4	59.7	58.9	58.7	59.0
Employed	5,340	5,213	5,184	5,945	5,942	5,923	5,811	5,796	5,788
Employment-population ratio[2]	45.8	46.1	46.0	51.0	52.0	52.0	51.2	51.3	51.4
Unemployed	841	850	862	836	843	875	869	843	862
Unemployment rate	13.6	14.0	14.3	12.3	12.4	12.9	13.0	12.7	13.0
Men	16.4	15.4	15.1	13.9	13.8	14.3	14.0	12.9	12.7
Women	10.6	12.6	13.3	10.7	10.9	11.3	11.9	12.4	13.2
BLACK									
Civilian noninstitutional population	20,905	21,163	21,188	20,986	21,108	21,136	21,164	21,163	21,188
Civilian labor force	13,303	13,351	13,292	13,443	13,507	13,576	13,522	13,510	13,437
Participation rate	63.6	63.1	62.7	64.3	64.0	64.2	63.9	63.8	63.4
Employed	11,655	11,821	11,798	11,883	11,923	11,954	11,920	11,978	12,030
Employment-population ratio[2]	55.8	55.9	55.7	56.8	56.5	56.6	56.3	56.6	56.8
Unemployed	1,648	1,530	1,494	1,560	1,584	1,622	1,602	1,532	1,407
Unemployment rate	12.4	11.5	11.2	11.6	11.7	11.9	11.8	11.3	10.5
Men, 20 years and over									
Civilian labor force	6,153	6,152	6,132	6,187	6,234	6,247	6,244	6,189	6,172
Participation rate	74.0	73.0	72.8	74.4	74.2	74.2	74.0	73.5	73.3
Employed	5,432	5,425	5,474	5,558	5,593	5,587	5,569	5,496	5,603
Employment-population ratio[2]	65.3	64.4	65.0	66.9	66.6	66.4	66.0	65.2	66.6
Unemployed	721	727	658	629	641	660	675	693	569
Unemployment rate	11.7	11.8	10.7	10.2	10.3	10.6	10.8	11.2	9.2
Women, 20 years and over									
Civilian labor force	6,327	6,411	6,417	6,333	6,336	6,373	6,311	6,393	6,423
Participation rate	60.7	60.7	60.7	60.8	60.2	60.4	59.7	60.5	60.7
Employed	5,669	5,819	5,792	5,699	5,706	5,722	5,681	5,802	5,821
Employment-population ratio	54.4	55.1	54.7	54.7	54.2	54.2	53.8	54.9	55.0
Unemployed	658	593	625	634	630	651	630	591	602
Unemployment rate	10.4	9.2	9.7	10.0	9.9	10.2	10.0	9.2	9.4
Both sexes, 16 to 19 years									
Civilian labor force	822	788	744	923	937	956	967	928	842
Participation rate	37.8	36.3	34.0	42.4	43.0	44.0	44.6	42.8	38.5
Employed	553	577	532	626	624	645	670	680	606
Employment-population ratio	25.4	26.6	24.3	28.8	28.6	29.7	30.9	31.3	27.7
Unemployed	269	210	211	297	313	311	297	248	236
Unemployment rate	32.7	26.7	28.4	32.2	33.4	32.5	30.7	26.7	28.0
Men	35.2	30.3	31.2	32.6	32.0	32.3	30.1	29.2	28.5
Women	30.0	22.7	25.5	31.7	34.9	32.7	31.4	24.0	27.5

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Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,806	14,080	14,119	13,806	13,936	13,977	14,019	14,080	14,119
Civilian labor force	9,129	9,322	9,347	9,192	9,339	9,424	9,496	9,440	9,400
Participation rate	67.1	66.2	66.2	67.6	67.0	67.4	67.7	67.0	66.6
Employed	8,441	8,585	8,562	8,549	8,595	8,672	8,691	8,709	8,666
Employment-population ratio[2]	62.0	61.0	60.6	62.8	61.7	62.0	62.0	62.3	61.4
Unemployed	688	738	785	643	744	752	804	671	734
Unemployment rate	7.5	7.9	8.4	7.0	8.0	8.0	8.5	7.1	7.8

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	115,023	118,037	118,308	116,737	117,585	117,838	117,999	117,980	118,035
Married men, spouse present	40,314	40,654	40,798	40,880	40,839	40,886	41,041	40,982	41,347
Married women, spouse present	29,255	29,658	29,815	29,379	29,544	29,767	29,696	29,897	29,704
Women who maintain families	6,381	6,259	6,384	6,381	6,354	6,351	6,349	6,215	6,378
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,416	1,394	1,383	1,644	1,678	1,687	1,677	1,634	1,578
Self-employed workers	1,284	1,290	1,253	1,471	1,408	1,373	1,368	1,354	1,375
Unpaid family workers	96	78	77	148	124	122	125	107	118
Nonagricultural industries:									
Wage and salary workers	103,644	104,510	104,930	104,815	105,504	105,980	105,843	105,747	106,117
Government	17,623	17,820	17,906	17,318	17,586	17,661	17,728	17,826	17,807
Private industries	86,021	86,690	87,024	87,497	87,908	88,279	87,915	88,121	88,510
Private households	1,056	974	988	1,131	967	1,051	1,077	1,035	1,021
Other industries	84,965	85,716	86,036	86,366	86,922	87,229	86,839	87,086	87,489
Self-employed workers	8,321	8,587	8,404	8,541	8,610	8,529	8,663	8,733	8,628
Unpaid family workers	282	240	282	290	280	284	251	256	313
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	4,996	5,043	4,897	4,987	4,787	4,803	4,802	4,983	4,897
Slack work	2,554	2,717	2,551	2,314	2,314	2,297	2,277	2,402	2,307
Could only find part-time work	2,153	2,052	2,036	2,339	2,082	2,162	2,106	2,255	2,211
Voluntary part time	15,958	15,229	16,196	15,150	15,286	15,254	15,386	14,931	15,381
Nonagricultural industries:									
Part time for economic reasons	4,725	4,814	4,712	4,722	4,526	4,552	4,554	4,729	4,703
Slack work	2,343	2,536	2,404	2,129	2,166	2,132	2,111	2,240	2,183
Could only find part-time work	2,102	2,009	2,010	2,272	2,021	2,087	2,051	2,172	2,173
Voluntary part time	15,584	14,921	15,804	14,707	14,936	14,906	14,983	14,515	14,924

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

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Table A-6. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989	1990				1990	1990	
	IV	I	II	III	IV	Dec.	Jan.	Feb.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1
U-2 Job losers as a percent of the civilian labor force	2.4	2.4	2.3	2.4	2.5	2.5	2.6	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.1	4.0	4.0	4.0	4.1	4.1	4.2	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	5.0	4.9	4.9	5.0	5.0	5.0	5.0	4.9
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.2	5.1	5.2	5.2	5.3	5.3	5.2	5.2
U-5b Total unemployed as a percent of the civilian labor force	5.3	5.2	5.3	5.3	5.3	5.3	5.3	5.3
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.4	7.2	7.3	7.2	7.2	7.3	7.3	7.2
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	8.2	7.9	8.0	7.9	7.9	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
CHARACTERISTIC									
Total, 16 years and over	6,380	6,535	6,564	5.2	5.3	5.3	5.3	5.3	5.3
Men, 16 years and over	3,504	3,597	3,630	5.2	5.2	5.3	5.3	5.3	5.2
Men, 20 years and over	2,627	2,863	2,929	4.5	4.5	4.6	4.6	4.7	4.6
Women, 16 years and over	2,868	2,938	3,084	5.1	5.4	5.4	5.5	5.2	5.4
Women, 20 years and over	2,361	2,431	2,527	4.6	4.8	4.8	4.8	4.6	4.8
Both sexes, 16 to 19 years	1,172	1,121	1,139	14.8	14.9	15.3	15.2	14.5	14.8
Married men, spouse present	1,280	1,421	1,298	3.0	3.0	3.1	3.0	3.4	3.0
Married women, spouse present	1,047	1,162	1,173	3.4	3.6	3.6	3.6	3.7	3.6
Women who maintain families	568	503	619	6.0	7.6	6.2	6.1	7.5	7.5
Full-time workers	5,064	5,300	5,236	4.8	4.9	5.1	5.0	5.0	4.9
Part-time workers	1,298	1,251	1,346	7.2	7.1	7.4	7.5	7.0	7.4
Labor force time lost[2]	—	—	—	6.0	5.9	5.9	6.0	6.0	5.9
INDUSTRY									
Nonagricultural private wage and salary workers	4,809	5,160	5,128	5.2	5.3	5.4	5.4	5.5	5.5
Goods-producing industries	1,796	1,979	1,938	6.1	6.2	6.3	6.5	6.7	6.6
Mining	56	53	39	7.6	4.8	6.2	4.4	6.8	4.8
Construction	644	823	699	10.0	9.3	9.8	9.8	9.3	8.9
Manufacturing	1,097	1,304	1,303	4.9	5.4	5.4	5.6	5.9	5.9
Durable goods	590	773	722	4.5	5.2	5.4	5.4	5.8	5.5
Nondurable goods	507	531	581	5.5	5.8	5.3	5.9	5.9	6.4
Service-producing industries	3,013	3,181	3,190	4.8	4.9	5.0	4.9	5.0	5.0
Transportation and public utilities	248	271	299	3.9	3.9	3.8	3.4	4.3	4.0
Wholesale and retail trade	1,319	1,484	1,453	5.7	5.9	6.4	6.3	6.2	6.0
Finance and service industries	1,445	1,426	1,477	4.3	4.3	4.3	4.2	4.3	4.4
Government workers	482	429	443	2.7	2.7	2.7	2.8	2.4	2.5
Agricultural wage and salary workers	164	166	161	9.1	9.8	12.1	9.7	9.2	9.3

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

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Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1980	Jan. 1980	Feb. 1980	Feb. 1980	Oct. 1980	Nov. 1980	Dec. 1980	Jan. 1980	Feb. 1980
DURATION									
Less than 5 weeks	3,117	3,447	3,087	3,212	3,186	3,258	3,302	3,119	3,159
5 to 14 weeks	2,329	2,294	2,555	1,884	1,996	1,991	2,013	2,012	2,079
15 weeks and over	1,436	1,514	1,511	1,300	1,378	1,422	1,382	1,430	1,389
15 to 26 weeks	768	833	845	660	743	785	730	777	731
27 weeks and over	666	682	666	640	635	657	632	653	638
Average (mean) duration, in weeks	12.3	11.7	11.7	12.3	11.7	11.6	11.5	12.1	11.7
Median duration, in weeks	6.0	5.1	5.9	5.4	5.0	4.8	4.8	5.1	5.4
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	45.3	47.5	43.0	50.1	48.4	48.8	48.5	47.5	47.8
5 to 14 weeks	33.8	31.6	35.8	29.5	30.5	29.8	30.1	30.7	31.5
15 weeks and over	20.9	20.9	21.2	20.3	21.1	21.3	20.4	21.8	20.7
15 to 26 weeks	11.2	11.5	11.8	10.3	11.4	11.5	10.9	11.8	11.1
27 weeks and over	9.7	9.4	9.3	10.0	9.7	9.8	9.5	9.9	9.7

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Feb. 1980	Jan. 1980	Feb. 1980	Feb. 1980	Oct. 1980	Nov. 1980	Dec. 1980	Jan. 1980	Feb. 1980
NUMBER OF UNEMPLOYED									
Job losers	3,362	3,819	3,646	2,879	2,979	3,092	3,097	3,183	3,103
On layoff	1,042	1,543	1,282	783	780	989	957	1,033	984
Other job losers	2,340	2,276	2,365	2,096	2,199	2,123	2,140	2,150	2,139
Job leavers	1,005	1,113	1,030	980	994	1,049	1,055	1,016	1,006
Reentrants	1,799	1,772	1,837	1,787	1,880	1,845	1,863	1,730	1,805
New entrants	696	552	619	757	685	695	686	640	690
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	49.1	52.6	51.1	45.1	45.5	46.3	46.3	48.5	47.1
On layoff	15.1	21.3	18.0	12.3	11.9	14.5	14.3	15.7	14.8
Other job losers	34.0	31.4	33.2	32.8	33.6	31.8	32.0	32.7	32.4
Job leavers	14.6	15.3	14.4	15.4	15.2	15.7	15.8	15.5	15.3
Reentrants	26.1	24.4	25.8	27.7	28.8	27.6	27.7	26.3	27.4
New entrants	10.1	7.6	8.7	11.9	10.5	10.4	10.3	9.7	10.3
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.8	3.1	3.0	2.3	2.4	2.5	2.5	2.6	2.5
Job leavers	.8	.9	.8	.8	.8	.8	.8	.8	.8
Reentrants	1.5	1.4	1.5	1.4	1.5	1.5	1.5	1.4	1.4
New entrants	.6	.4	.5	.6	.6	.6	.6	.5	.5

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Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
Total, 16 years and over	6,360	6,535	6,594	5.2	5.3	5.3	5.3	5.3	5.3
16 to 24 years	2,343	2,299	2,294	10.6	11.1	11.3	11.2	10.6	10.7
16 to 19 years	1,172	1,121	1,138	14.8	14.9	15.3	15.2	14.5	14.8
16 to 17 years	552	434	509	17.6	16.9	17.4	18.1	14.8	16.8
18 to 19 years	603	683	609	12.7	13.5	13.8	13.4	14.2	13.0
20 to 24 years	1,171	1,178	1,156	8.2	8.9	9.0	8.9	8.5	8.4
25 years and over	4,026	4,279	4,304	4.0	4.1	4.1	4.1	4.2	4.2
25 to 54 years	3,569	3,780	3,781	4.2	4.2	4.2	4.3	4.3	4.3
55 years and over	459	525	526	3.0	3.0	3.2	3.2	3.4	3.4
Men, 16 years and over	3,504	3,597	3,530	5.2	5.2	5.3	5.3	5.3	5.2
16 to 24 years	1,302	1,267	1,226	11.2	11.7	12.0	11.8	11.2	10.8
16 to 19 years	677	614	601	16.4	15.8	16.7	16.1	15.1	14.9
16 to 17 years	304	214	259	18.8	18.5	19.0	19.6	14.2	16.5
18 to 19 years	368	397	336	14.7	14.2	15.1	13.8	15.6	13.7
20 to 24 years	625	653	625	8.3	9.3	9.4	9.5	8.9	8.6
25 years and over	2,212	2,373	2,313	4.0	3.9	4.0	3.9	4.2	4.1
25 to 54 years	1,933	2,079	2,018	4.1	4.0	4.1	4.0	4.3	4.2
55 years and over	290	313	308	3.3	3.2	3.5	3.6	3.6	3.5
Women, 16 years and over	2,856	2,938	3,064	5.1	5.4	5.4	5.5	5.2	5.4
16 to 24 years	1,041	1,032	1,069	9.9	10.4	10.4	10.4	10.1	10.4
16 to 19 years	495	507	537	13.1	13.8	13.8	14.3	13.7	14.6
16 to 17 years	248	220	250	16.3	15.0	15.7	16.5	15.5	17.3
18 to 19 years	235	286	273	10.4	12.8	12.3	13.0	12.6	12.3
20 to 24 years	546	525	532	8.1	8.5	8.5	8.2	8.0	8.1
25 years and over	1,814	1,906	1,991	4.0	4.2	4.2	4.3	4.1	4.3
25 to 54 years	1,636	1,701	1,763	4.2	4.4	4.4	4.6	4.3	4.5
55 years and over	169	212	216	2.6	2.8	2.9	2.7	3.3	3.3

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
Civilian noninstitutional population	28,830	27,355	27,405	28,830	27,227	27,280	27,332	27,355	27,405
Civilian labor force	17,147	17,387	17,329	17,363	17,801	17,686	17,648	17,802	17,545
Participation rate	63.9	63.6	63.2	64.7	64.6	64.8	64.6	64.3	64.0
Employed	15,276	15,617	15,620	15,571	15,797	15,661	15,641	15,827	15,927
Employment-population ratio[2]	56.9	57.1	57.0	58.0	58.0	58.1	58.0	57.9	58.1
Unemployed	1,871	1,769	1,709	1,792	1,804	1,825	1,807	1,775	1,618
Unemployment rate	10.9	10.2	9.9	10.3	10.2	10.3	10.2	10.1	9.2
Not in labor force	9,682	9,968	10,076	9,477	9,625	9,594	9,684	9,753	9,860

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

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Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990
Total, 16 years and over[1]	115,023	116,308	6,993	7,134	5.8	5.8
Managerial and professional specialty	30,108	30,812	602	596	2.0	1.9
Executive, administrative, and managerial	14,592	14,746	378	326	2.5	2.2
Professional specialty	15,514	16,067	224	262	1.4	1.6
Technical, sales, and administrative support	35,400	36,777	1,478	1,542	4.0	4.3
Technicians and related support	3,589	3,897	102	130	2.8	3.2
Sales occupations	13,600	14,135	623	739	4.4	5.1
Administrative support, including clerical	18,231	18,754	752	753	4.0	3.9
Service occupations	15,537	15,279	1,043	1,120	6.3	6.8
Private household	910	770	36	47	3.7	5.8
Protective service	1,960	1,992	60	60	3.0	2.9
Service, except private household and protective	12,678	12,517	928	1,013	6.8	7.5
Precision production, craft, and repair	13,466	13,431	985	995	6.8	6.8
Mechanics and repairers	4,596	4,408	169	166	3.6	3.6
Construction trades	4,705	5,005	608	578	11.4	10.3
Other precision production, craft, and repair	4,166	4,018	208	241	4.8	5.7
Operators, fabricators, and laborers	17,866	17,506	1,786	1,829	9.2	9.5
Machine operators, assemblers, and inspectors	8,169	7,978	666	741	7.5	8.5
Transportation and material moving occupations	4,683	4,712	373	376	7.4	7.4
Handlers, equipment cleaners, helpers, and laborers	4,803	4,816	756	712	13.6	12.9
Construction laborers	719	746	205	181	22.2	19.5
Other handlers, equipment cleaners, helpers, and laborers	4,084	4,070	549	531	11.8	11.5
Farming, forestry, and fishing	2,956	2,703	285	249	8.5	8.4

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990	Feb. 1989	Feb. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,350	7,573	6,712	6,867	6,460	6,569	252	329	3.9	4.8
35 to 49 years	4,417	6,514	6,102	6,166	5,853	5,895	249	304	4.1	4.9
35 to 39 years	1,905	1,528	1,908	1,443	1,701	1,380	107	63	5.9	5.8
40 to 44 years	3,195	3,324	3,048	3,175	2,954	3,023	94	151	3.1	4.8
45 to 49 years	1,317	1,662	1,245	1,551	1,197	1,492	48	69	3.9	4.4
50 years and over	933	1,059	611	719	597	684	14	25	2.3	3.5
NONVETERANS										
Total, 35 to 49 years	15,861	16,820	14,920	15,784	14,196	15,178	624	606	4.2	3.8
35 to 39 years	7,190	7,707	6,786	7,331	6,491	7,070	295	261	4.3	3.6
40 to 44 years	4,636	4,943	4,344	4,612	4,143	4,422	201	190	4.6	4.1
45 to 49 years	4,036	4,170	3,990	3,842	3,562	3,687	128	155	3.5	4.0

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population. Data for 30-to 34-year-old veterans are no longer shown in this table because the group is rapidly disappearing (into the 35-39 age category) and the numbers remaining for some labor force categories are not large enough to warrant their continued publication.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
California									
Civilian noninstitutional population	21,278	21,718	21,756	21,278	21,602	21,642	21,680	21,718	21,756
Civilian labor force	14,280	14,442	14,433	14,341	14,673	14,653	14,627	14,491	14,496
Employed	13,493	13,647	13,662	13,613	13,955	13,913	13,854	13,734	13,784
Unemployed	787	794	772	728	718	740	773	757	712
Unemployment rate	5.5	5.5	5.3	5.1	4.9	5.1	5.3	5.2	4.9
Florida									
Civilian noninstitutional population	9,804	10,015	10,034	9,804	9,959	9,979	9,997	10,015	10,034
Civilian labor force	5,976	6,184	6,270	6,071	6,225	6,258	6,245	6,289	6,369
Employed	5,665	5,823	5,905	5,745	5,864	5,905	5,863	5,940	5,989
Unemployed	311	361	365	326	361	353	382	349	380
Unemployment rate	5.2	5.8	5.8	5.4	5.8	5.6	5.8	5.5	6.0
Illinois									
Civilian noninstitutional population	8,817	8,854	8,857	8,817	8,845	8,849	8,851	8,854	8,857
Civilian labor force	5,976	6,006	5,979	6,031	6,031	6,065	6,039	6,064	6,029
Employed	5,607	5,595	5,587	5,699	5,636	5,669	5,661	5,673	5,674
Unemployed	369	412	392	332	395	396	378	391	355
Unemployment rate	6.2	6.9	6.6	5.5	6.5	6.5	6.3	6.4	5.9
Massachusetts									
Civilian noninstitutional population	4,617	4,619	4,619	4,617	4,619	4,619	4,619	4,619	4,619
Civilian labor force	3,180	3,122	3,174	3,212	3,136	3,165	3,172	3,152	3,203
Employed	3,055	2,967	2,991	3,100	2,997	3,025	3,027	3,011	3,034
Unemployed	125	155	183	112	141	140	145	141	169
Unemployment rate	3.9	5.0	5.8	3.5	4.5	4.4	4.6	4.5	5.3
Michigan									
Civilian noninstitutional population	6,979	6,993	6,993	6,979	6,990	6,991	6,992	6,993	6,993
Civilian labor force	4,553	4,591	4,555	4,603	4,658	4,626	4,645	4,645	4,605
Employed	4,244	4,158	4,186	4,309	4,286	4,287	4,310	4,254	4,250
Unemployed	309	433	370	294	372	339	335	391	355
Unemployment rate	6.8	9.4	8.1	6.4	8.0	7.3	7.2	8.4	7.7
New Jersey									
Civilian noninstitutional population	6,034	6,030	6,029	6,034	6,032	6,032	6,031	6,030	6,029
Civilian labor force	4,021	3,980	4,038	4,014	4,021	4,034	4,006	3,994	4,029
Employed	3,841	3,773	3,838	3,854	3,828	3,834	3,857	3,810	3,848
Unemployed	180	207	200	160	193	200	149	184	181
Unemployment rate	4.5	5.2	5.0	4.0	4.8	5.0	3.7	4.6	4.5
New York									
Civilian noninstitutional population	13,806	13,803	13,801	13,806	13,806	13,806	13,804	13,803	13,801
Civilian labor force	8,618	8,741	8,680	8,674	8,674	8,738	8,782	8,709	8,730
Employed	8,140	8,263	8,206	8,235	8,253	8,278	8,278	8,300	8,294
Unemployed	477	478	474	439	421	460	484	409	436
Unemployment rate	5.5	5.5	5.5	5.1	4.9	5.3	5.5	4.7	5.0
North Carolina									
Civilian noninstitutional population	4,915	4,971	4,975	4,915	4,956	4,961	4,966	4,971	4,975
Civilian labor force	3,340	3,332	3,371	3,362	3,385	3,373	3,396	3,361	3,395
Employed	3,214	3,179	3,239	3,248	3,275	3,275	3,289	3,237	3,274
Unemployed	126	153	132	114	110	98	107	124	121
Unemployment rate	3.8	4.6	3.9	3.4	3.2	2.9	3.2	3.7	3.6
Ohio									
Civilian noninstitutional population	8,252	8,274	8,275	8,252	8,269	8,271	8,272	8,274	8,275
Civilian labor force	5,355	5,391	5,344	5,386	5,462	5,415	5,442	5,426	5,372
Employed	5,043	4,979	4,998	5,109	5,135	5,081	5,110	5,060	5,061
Unemployed	312	412	346	277	327	334	332	366	311
Unemployment rate	5.8	7.6	6.5	5.1	6.0	6.2	6.1	6.7	5.8

See footnotes at end of table.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Feb. 1989	Jan. 1990	Feb. 1990	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990	Feb. 1990
Pennsylvania									
Civilian noninstitutional population	9,368	9,378	9,379	9,368	9,374	9,376	9,377	9,378	9,379
Civilian labor force	5,790	5,860	5,883	5,878	5,903	5,910	5,880	5,875	5,906
Employed	5,506	5,513	5,510	5,625	5,630	5,598	5,575	5,568	5,623
Unemployed	283	348	373	253	273	312	306	307	343
Unemployment rate	4.9	5.9	6.3	4.3	4.7	5.3	5.2	5.2	5.7
Texas									
Civilian noninstitutional population	12,157	12,300	12,312	12,157	12,288	12,276	12,288	12,300	12,312
Civilian labor force	8,273	8,321	8,375	8,391	8,480	8,460	8,423	8,440	8,484
Employed	7,662	7,840	7,788	7,822	7,908	7,864	7,866	7,999	7,948
Unemployed	611	481	588	569	552	596	557	441	545
Unemployment rate	7.4	5.8	7.0	6.8	6.5	7.1	6.6	5.2	6.4

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/
Total	106.342	110.416	108.342	108.869	107.711	109.171	109.452	109.578	109.902	110.274
Total private	88.463	92.232	90.443	90.637	90.124	91.328	91.622	91.699	91.991	92.335
Goods-producing industries	24.961	25.512	24.936	24.983	25.629	25.603	25.689	25.532	25.513	25.664
Mining	696	748	734	731	711	731	737	739	746	747
Oil and gas extraction	389.2	428.1	418.1	414.5	394	409	414	416	419	420
Construction	4,747	5,240	4,970	4,927	5,278	5,335	5,353	5,384	5,488	5,468
General building contractors	1,284.7	1,388.8	1,334.6	1,318.7	1,398	1,386	1,391	1,388	1,425	1,435
Manufacturing	19,518	19,532	19,232	19,325	19,648	19,537	19,317	19,489	19,359	19,449
Production workers	13,318	13,292	13,022	13,125	13,426	13,307	13,276	13,262	13,133	13,227
Durable goods	11,536	11,452	11,236	11,341	11,594	11,457	11,439	11,489	11,288	11,394
Production workers	7,702	7,612	7,417	7,529	7,749	7,613	7,594	7,579	7,458	7,571
Lumber and wood products	754.7	757.0	745.8	742.8	778	766	765	765	770	769
Furniture and fixtures	534.1	528.5	523.5	522.2	534	525	525	523	522	522
Stone, clay, and glass products	584.6	596.3	580.5	579.7	608	600	602	600	601	603
Primary metal industries	786.8	773.0	766.6	770.0	784	776	772	771	766	770
Blast furnaces and basic steel products	275.9	270.1	269.9	268.5	274	271	269	270	270	269
Fabricated metal products	1,452.2	1,434.5	1,403.5	1,412.2	1,458	1,434	1,430	1,426	1,406	1,416
Machinery, except electrical	2,141.5	2,151.4	2,142.8	2,141.7	2,138	2,139	2,146	2,145	2,141	2,137
Electrical and electronic equipment	2,058.4	2,004.4	1,992.6	1,985.5	2,062	2,018	2,012	1,992	1,989	1,989
Transportation equipment	2,068.6	2,042.4	1,920.6	2,025.0	2,067	2,031	2,029	2,022	1,925	2,023
Motor vehicles and equipment	870.3	838.0	720.5	824.4	871	833	824	825	728	825
Instruments and related products	770.7	776.9	775.5	775.4	772	779	778	774	776	777
Miscellaneous manufacturing	385.0	389.5	384.5	386.6	391	391	389	391	394	392
Nondurable goods	7,982	8,080	7,996	7,984	8,054	8,080	8,078	8,080	8,071	8,055
Production workers	5,616	5,680	5,605	5,596	5,677	5,692	5,682	5,683	5,675	5,656
Food and kindred products	1,595.6	1,666.3	1,632.5	1,623.3	1,650	1,676	1,673	1,676	1,680	1,679
Tobacco manufactures	56.2	55.8	55.4	51.9	56	51	51	51	51	51
Textile mill products	726.2	720.1	716.1	712.9	728	724	721	719	719	714
Apparel and other textile products	1,096.2	1,080.1	1,064.7	1,064.1	1,096	1,084	1,084	1,081	1,073	1,063
Paper and allied products	691.2	668.8	691.6	689.2	696	697	697	697	695	694
Printing and publishing	1,594.6	1,629.0	1,622.5	1,627.4	1,595	1,612	1,617	1,621	1,624	1,627
Chemicals and allied products	1,080.3	1,099.9	1,096.9	1,101.1	1,085	1,096	1,098	1,103	1,104	1,107
Petroleum and coal products	157.1	161.2	159.4	159.4	161	164	164	163	163	164
Rubber and misc. plastics products	842.1	836.1	823.7	821.0	843	837	835	832	826	821
Leather and leather products	142.1	136.9	134.7	134.1	144	139	138	137	136	135
Service-producing industries	81.381	84.904	83.406	83.886	82.082	83.568	83.843	84.038	84.389	84.610
Transportation and public utilities	5,597	5,881	5,789	5,801	5,667	5,729	5,753	5,834	5,855	5,876
Transportation	3,395	3,664	3,582	3,592	3,453	3,566	3,592	3,613	3,637	3,654
Communication and public utilities	2,202	2,217	2,207	2,209	2,214	2,163	2,161	2,221	2,218	2,222
Wholesale trade	6,115	6,314	6,281	6,269	6,171	6,278	6,300	6,311	6,331	6,325
Durable goods	3,634	3,746	3,735	3,733	3,657	3,721	3,737	3,746	3,754	3,756
Nondurable goods	2,481	2,568	2,546	2,536	2,514	2,557	2,563	2,565	2,577	2,569
Retail trade	18,937	20,549	19,536	19,332	19,460	19,679	19,744	19,718	19,851	19,848
General merchandise stores	2,705.2	2,769.1	2,558.4	2,625.1	2,681	2,678	2,692	2,670	2,691	2,698
Food stores	3,177.0	3,410.7	3,348.8	3,328.4	3,212	3,321	3,334	3,341	3,366	3,362
Automotive dealers and service stations	2,118.0	2,152.3	2,141.5	2,141.7	2,150	2,169	2,169	2,163	2,168	2,172
Eating and drinking places	6,062.1	6,395.8	6,148.5	6,195.6	6,332	6,403	6,417	6,432	6,459	6,467
Finance, insurance, and real estate	6,698	6,867	6,835	6,847	6,763	6,851	6,871	6,885	6,897	6,912
Finance	3,293	3,357	3,348	3,351	3,311	3,345	3,357	3,360	3,355	3,361
Insurance	2,114	2,146	2,150	2,157	2,116	2,134	2,138	2,144	2,154	2,159
Real estate	1,286	1,364	1,337	1,339	1,336	1,372	1,376	1,381	1,388	1,392
Services	26,155	27,309	27,068	27,405	26,434	27,188	27,345	27,419	27,564	27,710
Business services	5,634.8	5,881.2	5,786.4	5,801.8	5,729	5,827	5,852	5,852	5,886	5,902
Health services	7,424.1	7,875.8	7,910.8	7,966.1	7,442	7,778	7,839	7,884	7,935	7,982
Government	17,879	18,184	17,899	18,232	17,587	17,843	17,830	17,871	17,911	17,939
Federal	2,969	2,974	2,974	2,975	2,982	2,984	2,982	2,974	2,992	2,990
State	4,189	4,243	4,124	4,254	4,095	4,153	4,162	4,156	4,161	4,162
Local	10,721	10,967	10,801	11,003	10,510	10,706	10,686	10,741	10,755	10,787

p = preliminary

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/
Total private	34.5	34.7	34.2	34.3	34.6	34.7	34.6	34.5	34.5	34.6
Mining	41.7	43.7	43.2	43.0	(2)	(2)	(2)	(2)	(2)	(2)
Construction	36.2	37.0	37.6	37.2	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	40.8	41.3	40.6	40.4	41.1	40.8	40.7	40.6	40.7	40.7
Overtime hours	3.8	3.9	3.5	3.4	3.9	3.9	3.7	3.6	3.7	3.6
Durable goods	41.5	41.9	41.2	41.1	41.8	41.2	41.2	41.2	41.2	41.3
Overtime hours	4.0	4.0	3.6	3.5	4.1	3.8	3.7	3.6	3.7	3.6
Lumber and wood products	39.0	40.2	39.7	39.4	39.6	40.4	40.3	40.1	40.3	39.9
Furniture and fixtures	39.1	40.3	39.3	38.8	39.7	39.2	39.4	39.2	39.7	39.4
Stone, clay, and glass products	41.1	41.4	41.2	40.9	42.2	42.3	42.4	41.3	42.1	42.0
Primary metal industries	43.6	43.1	42.7	42.5	43.4	42.5	42.6	42.5	42.6	42.5
Blast furnaces and basic steel products	43.7	43.2	43.4	43.4	43.8	42.6	43.0	42.8	43.4	43.3
Fabricated metal products	41.6	42.1	41.3	41.0	41.9	41.5	41.4	41.2	41.2	41.2
Machinery, except electrical	42.5	43.0	42.2	42.1	42.6	42.0	42.1	42.0	42.1	42.2
Electrical and electronic equipment	40.6	41.5	40.9	40.7	40.9	40.9	40.8	40.5	40.7	41.0
Transportation equipment	43.0	42.6	41.5	41.8	43.1	41.2	40.9	41.9	41.4	41.8
Motor vehicles and equipment	43.8	42.9	41.0	41.6	43.9	42.9	42.3	42.2	41.0	41.6
Instruments and related products	41.5	41.8	41.3	41.0	41.5	41.1	41.0	40.9	41.2	41.0
Miscellaneous manufacturing	39.2	40.0	39.1	39.1	39.5	39.5	39.7	39.5	39.3	39.4
Nondurable goods	39.8	40.4	39.8	39.5	40.2	40.2	40.1	39.9	39.9	39.9
Overtime hours	3.5	3.8	3.5	3.3	3.7	3.7	3.6	3.6	3.6	3.5
Food and kindred products	39.6	41.2	40.3	39.7	40.5	40.8	40.8	40.6	40.5	40.4
Tobacco manufactures	37.8	38.1	37.6	37.3	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	40.5	40.6	40.2	39.7	40.8	40.7	40.5	40.2	40.5	40.0
Apparel and other textile products	36.9	36.7	36.3	36.4	37.1	36.9	36.8	36.3	36.6	36.6
Paper and allied products	42.9	43.9	43.1	42.6	43.2	43.4	43.4	43.1	43.1	42.9
Printing and publishing	37.7	38.2	37.5	37.7	38.0	37.8	37.9	37.6	37.8	37.9
Chemicals and allied products	42.5	43.5	42.5	42.0	42.3	42.4	42.3	42.7	42.5	42.1
Petroleum and coal products	44.0	45.4	43.5	44.0	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.6	41.5	41.0	41.3	41.7	41.6	41.2	40.8	40.8	41.1
Leather and leather products	37.8	37.7	37.2	37.3	38.6	37.7	37.5	37.2	37.4	38.0
Transportation and public utilities	39.1	39.5	38.8	39.1	39.4	39.3	39.1	39.3	39.1	39.4
Wholesale trade	37.8	38.2	37.8	37.7	38.1	38.1	38.1	38.0	38.0	38.0
Retail trade	28.3	29.2	28.1	28.3	28.9	29.0	28.8	28.7	28.8	28.9
Finance, insurance, and real estate	35.5	35.7	35.7	35.9	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.4	32.5	32.4	32.5	32.5	32.8	32.6	32.6	32.5	32.6

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance; insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficant precision.
p = preliminary.

ESTABLISHMENT DATA

Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Feb. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/	Feb. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/
Total private	$9.55	$9.84	$9.87	$9.90	$327.57	$341.45	$337.55	$339.57
Seasonally adjusted	9.52	9.83	9.82	9.87	329.39	339.14	338.79	341.38
Mining	13.22	13.31	13.27	13.33	551.27	581.65	573.26	573.19
Construction	13.21	13.64	13.41	13.41	478.28	504.68	504.22	498.85
Manufacturing	10.38	10.67	10.59	10.69	423.50	440.67	429.95	431.88
Durable goods	10.91	11.18	11.06	11.20	452.77	468.46	455.67	460.32
Lumber and wood products	8.69	9.00	8.96	9.02	338.91	361.80	355.71	359.39
Furniture and fixtures	8.08	8.42	8.46	8.39	315.93	339.33	332.48	329.53
Stone, clay, and glass products	10.62	10.88	10.87	10.84	436.48	450.43	447.84	443.36
Primary metal industries	12.27	12.52	12.54	12.66	532.52	539.61	535.46	538.05
Blast furnaces and basic steel products	14.13	14.40	14.50	14.63	617.48	622.08	629.30	634.94
Fabricated metal products	10.46	10.69	10.55	10.65	435.14	450.05	439.72	436.65
Machinery, except electrical	11.23	11.57	11.50	11.51	477.28	497.51	485.30	484.57
Electrical and electronic equipment	10.26	10.52	10.51	10.56	416.56	436.58	429.86	429.79
Transportation equipment	13.59	13.93	13.59	13.98	584.37	593.42	563.99	584.56
Motor vehicles and equipment	14.19	14.49	13.79	14.49	621.52	621.62	565.39	602.78
Instruments and related products	10.14	10.49	10.53	10.54	420.81	438.48	434.89	432.14
Miscellaneous manufacturing	8.23	8.60	8.59	8.60	322.62	344.00	335.87	336.26
Nondurable goods	9.62	9.95	9.96	9.98	382.88	401.98	396.41	394.21
Food and kindred products	9.26	9.50	9.48	9.50	366.70	391.40	382.04	377.15
Tobacco manufactures	14.75	15.31	15.64	15.57	557.55	583.31	588.06	580.76
Textile mill products	7.59	7.87	7.92	7.94	307.40	319.52	318.38	315.22
Apparel and other textile products	6.32	6.45	6.41	6.45	233.21	236.72	232.68	236.78
Paper and allied products	11.80	12.14	12.16	12.16	506.22	532.95	524.10	518.02
Printing and publishing	10.74	11.07	11.10	11.13	404.90	422.87	416.25	419.60
Chemicals and allied products	12.88	13.31	13.32	13.24	544.82	576.32	566.10	556.08
Petroleum and coal products	15.45	15.76	15.90	16.26	679.80	715.50	688.47	715.44
Rubber and misc. plastics products	9.31	9.58	9.61	9.63	387.30	397.57	394.01	394.83
Leather and leather products	6.49	6.73	6.81	6.81	245.32	253.72	253.33	254.01
Transportation and public utilities	12.50	12.76	12.76	12.77	488.75	501.47	495.09	499.31
Wholesale trade	10.23	10.62	10.59	10.62	386.69	405.68	400.30	400.37
Retail trade	6.67	6.86	6.74	6.74	183.10	194.47	189.39	190.74
Finance, insurance, and real estate	9.47	9.76	9.83	9.84	339.03	348.43	350.93	353.26
Services	9.28	9.69	9.73	9.75	300.67	314.93	315.25	316.88

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry, seasonally adjusted

Industry	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/	Percent change from: Jan. 1990-Feb. 1990
Total private2/:							
Current dollars	$9.52	$9.78	$9.78	$9.83	$9.82	$9.87	0.5
Constant (1977) dollars3/	4.81	4.81	4.79	4.80	4.74	N.A.	(4)
Construction	13.22	13.44	13.52	13.60	13.55	$13.42	.7
Manufacturing	10.37	10.55	10.57	10.61	10.55	10.68	1.2
Excluding overtime5/	9.89	10.08	10.11	10.15	10.10	10.23	1.3
Transportation and public utilities	12.68	12.68	12.61	12.71	12.75	12.74	-.1
Wholesale trade	10.18	10.54	10.54	10.59	10.55	10.58	.3
Retail trade	6.45	6.61	6.61	6.65	6.69	6.72	.4
Finance, insurance, and real estate	9.35	9.77	9.67	9.79	9.76	9.72	-.4
Services	9.19	9.58	9.54	9.62	9.62	9.65	.3

1/ See footnote 1, table B-2.

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was -1.3 percent from December 1989 to January 1990, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p/ = preliminary.

ESTABLISHMENT DATA

Table B-3. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Feb. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/	Feb. 1989	Oct. 1989	Nov. 1989	Dec. 1989	Jan. 1990p/	Feb. 1990p/
Total private	123.3	130.4	125.8	126.2	127.2	129.2	129.1	128.8	129.4	130.3
Goods-producing industries	98.2	102.1	98.1	97.9	102.9	102.4	102.5	101.1	102.1	102.8
Mining	77.2	87.2	85.1	84.1	88.1	85.5	86.2	85.3	86.5	87.1
Construction	118.4	136.0	129.3	126.4	140.5	143.8	145.8	139.5	149.2	150.0
Manufacturing	95.3	96.2	92.7	93.0	96.7	95.2	94.8	94.5	93.7	94.4
Durable goods	93.9	93.7	89.7	90.8	95.0	92.2	91.9	91.6	90.3	91.8
Lumber and wood products	99.5	102.2	99.5	98.2	104.5	104.2	103.9	103.2	104.4	102.7
Furniture and fixtures	112.5	113.7	109.6	108.1	113.7	109.9	110.2	109.1	110.3	109.4
Stone, clay, and glass products	84.5	86.4	83.9	83.0	98.9	89.6	90.0	87.7	89.4	88.2
Primary metal industries	68.6	66.5	65.5	65.4	68.7	65.9	65.6	65.6	65.8	65.6
Blast furnaces and basic steel products	53.3	51.1	51.5	51.1	53.4	51.1	50.8	51.1	51.5	51.4
Fabricated metal products	91.6	91.0	86.7	87.2	92.8	89.7	89.1	88.5	86.9	87.9
Machinery, except electrical	95.6	94.9	93.8	92.9	95.7	92.0	92.7	92.4	92.6	92.8
Electrical and electronic equipment	99.5	98.2	96.3	95.3	99.9	97.1	96.6	95.0	95.4	96.2
Transportation equipment	101.2	97.8	86.3	94.8	101.0	94.3	92.7	95.0	86.8	94.3
Motor vehicles and equipment	91.7	85.4	67.2	81.4	91.1	84.7	82.3	82.4	67.7	81.6
Instruments and related products	115.6	117.6	116.2	116.8	115.6	116.1	115.2	114.4	116.1	116.1
Miscellaneous manufacturing	84.2	87.1	84.0	84.6	86.4	86.0	86.2	86.3	87.2	86.8
Nondurable goods	97.3	100.0	97.1	96.3	99.3	99.6	99.2	98.7	98.7	98.2
Food and kindred products	96.2	105.8	101.1	98.8	102.2	105.9	105.5	105.0	105.5	104.9
Tobacco manufactures	73.5	72.6	70.5	67.1	74.1	67.6	66.9	66.2	67.3	68.2
Textile mill products	79.5	78.7	77.6	76.0	88.4	79.5	78.8	78.1	78.4	76.9
Apparel and other textile products	85.0	83.1	80.9	81.1	85.5	84.0	83.6	82.4	82.4	81.5
Paper and allied products	100.6	104.2	101.1	99.5	101.9	102.8	102.8	102.1	101.7	101.0
Printing and publishing	137.0	142.3	138.8	140.1	138.4	138.3	139.3	138.8	139.9	141.0
Chemicals and allied products	99.8	105.8	101.4	100.3	100.0	101.8	101.5	102.8	102.3	101.2
Petroleum and coal products	79.1	84.4	79.8	80.9	83.3	85.6	85.3	85.6	82.4	84.9
Rubber and misc. plastics products	119.7	117.6	114.3	114.8	120.8	118.1	116.8	115.3	114.2	114.2
Leather and leather products	55.2	53.8	51.3	51.3	57.0	53.8	53.0	52.1	52.4	52.8
Service-producing industries	137.2	146.0	141.0	141.9	140.6	144.0	143.9	144.1	144.6	145.5
Transportation and public utilities	113.8	120.9	117.0	118.2	116.2	117.4	117.3	119.8	119.3	120.9
Wholesale trade	123.5	128.8	126.5	126.3	125.9	128.0	128.3	128.1	128.7	128.6
Retail trade	120.6	134.5	123.7	122.9	126.7	128.4	128.3	127.6	128.7	129.1
Finance, insurance, and real estate	139.8	143.9	143.0	144.1	140.8	145.0	143.8	144.1	144.3	145.5
Services	163.7	171.3	168.9	171.4	166.1	172.2	172.0	172.4	172.7	174.1

1/ See footnote 1, table B-2.

p = preliminary.

ESTABLISHMENT DATA

Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonagricultural payrolls, 349 industries1/											
Over 1-month span:												
1988	60.7	63.5	63.0	62.8	61.3	67.2	63.6	58.0	55.4	63.9	68.2	64.6
1989	68.3	60.5	61.0	58.2	55.6	59.7	55.6	57.4	47.9	55.3	60.9	51.9
1990	p/60.5	p/55.9										
Over 3-month span:												
1988	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989	71.6	70.1	64.5	61.9	61.6	60.7	61.6	53.4	54.6	55.7	57.2	p/61.7
1990	p/58.2											
Over 6-month span:												
1988	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989	75.1	69.5	68.2	66.0	63.0	57.9	57.7	60.2	53.4	p/59.0	p/58.2	
1990												
Over 12-month span:												
1988	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989	73.2	73.6	69.6	67.6	66.6	62.6	p/63.9	p/64.0				
1990												
	Manufacturing payrolls, 141 industries1/											
Over 1-month span:												
1988	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	62.8	64.9	58.5
1989	62.4	53.5	53.2	49.6	46.8	48.6	49.6	45.4	34.8	52.1	48.2	44.7
1990	p/46.5	p/46.1										
Over 3-month span:												
1988	63.1	61.0	62.4	64.9	67.4	67.0	64.5	58.2	62.1	66.7	71.3	70.9
1989	67.4	63.8	55.7	51.8	49.3	48.6	47.9	36.0	41.8	41.5	46.5	p/42.9
1990	p/43.3											
Over 6-month span:												
1988	66.3	66.3	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989	69.5	58.5	55.7	52.8	48.9	39.0	40.1	41.8	34.4	p/38.3	p/39.7	
1990												
Over 12-month span:												
1988	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989	63.1	63.8	57.1	53.5	49.6	42.9	p/63.6	p/42.6				
1990												

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p=preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one- half of the industries with unchanged employment. where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. OK. Last month you reported an increase of 275,000 payroll jobs in January and that figure has been revised up to 330,000. When you combine that with 372,000 new payroll jobs in February, and you get the impression of very strong job growth in the economy at a time when there are a lot of indicators suggesting the economy is growing slowly.

So what, then, do the January and February figures say about the current state of the economy?

Mrs. NORWOOD. Well, as I tried to explain in my statement, Mr. Chairman, we have to recognize the very special factors that occurred.

The first is the situation for the 90,000 auto workers. They were off the payroll in January and they were back on the payroll in February. So, there really has been no change.

Manufacturing is certainly not doing well in terms of its employment. I don't think there's any doubt about that. Some manufacturing industries continue to lose jobs.

The auto industry seems to have difficulty controlling its inventories and when autos are affected, then related industries that feed into the production of automobiles are also affected.

We had a large increase in construction that I think was largely due to the mild weather during the survey week. The real question there is whether that means that we will perhaps have less construction activity during the traditional spring buildup. If that's the case, then it means that we are borrowing some of the employment from March and April.

Representative HAMILTON. If you look at the last several months, say November through February, what do they tell you with regard to a slowdown or a speedup in the economy or do they tell you much of anything?

Mrs. NORWOOD. I think they are telling us that there is employment growth, that that employment growth is not so large as it had been a year or two ago, and that most of it continues to be the service sector, especially the services industry itself.

Representative HAMILTON. In the figures with respect to the different categories of the labor force—adult women unemployment rose 0.2 percent; the rate for teenagers is up 0.3 percent; Hispanics rose 0.7 percent; blacks fell 0.8 percent—is any of that significant statistically?

Mrs. NORWOOD. The 1-month statistical significance tests are met by some of those figures. The black teenage rate has been coming down since September little by little, but I think that apart from that there really is quite a bit of stability. The overall black rate has been coming down recently.

Representative HAMILTON. Is that because there's been a decrease in the number in the labor force or is it an increase in jobs?

Mrs. NORWOOD. Well, for the black population as a whole, for example, the labor force has gone down a bit, but employment has been up about 145,000 over the year.

Representative HAMILTON. Some people just drop out of the labor force. They don't seek jobs any more.

Mrs. NORWOOD. Well, if we look at the participation rates, that bounces around a bit, but the participation rate for the black popu-

lation as a whole has come down. It was, for example, 64.3 percent last February, and it's now nearly a point lower than that.

So you're right, that that has happened, but at the same time there has been some increase in employment.

Representative HAMILTON. We note that the employment firm, Manpower, Inc., has released a survey of 15,000 firms and their hiring plans for the second quarter of 1990. That was released a week ago.

According to reports, fewer businesses plan to add workers this year than during the second quarter of last year. More plan to reduce employment.

Do you see the same kind of slowdown in hiring that the Manpower survey suggests and is forecasting?

Mrs. NORWOOD. I am not familiar with the Manpower survey. Clearly, there is a slowdown in jobs created this year and part of last year as compared to previous times. So that kind of a forecast would not surprise me.

Representative HAMILTON. You don't have surveys of hiring plans at BLS?

Mrs. NORWOOD. No. Years ago, we did try to gather information from employers about occupations that might be needed and what their plans were for hiring them, but we found that they were not very realistic because plans shift all the time, obviously as business conditions shift. They don't seem to be any better at forecasting the future of what their labor force needs might be than anyone else.

Representative HAMILTON. Why do you get an increase in the number of unemployment insurance claims and the number of people getting unemployment benefits if your unemployment rate is steady? Your figures show that, do they not?

Mrs. NORWOOD. Well, yes, the insured unemployment counts bounce around from 1 week to another, certainly. I think it's important to recognize, however, that the unemployment insurance figures really account for only about 40 percent of the people who are unemployed according to the CPS. That's in part because unemployment insurance isn't available for the new entrants, for example.

Representative HAMILTON. So only 40 percent of the unemployed people roughly at any time are getting unemployment insurance. Is that what you're telling me?

Mrs. NORWOOD. And that's a bit high because—I have some figures here by week—each month that is—and if you look at them, they are really in the 30's—35 percent or 33 percent.

Mr. BREGGER. If I may, in 1989, it averaged about a third, 33 percent.

Representative HAMILTON. Are the rules of eligibility for unemployment compensation set by Federal or State law?

Mrs. NORWOOD. Each of the States has somewhat different eligibility requirements. There are some general requirements set by the Federal Government. Some States require, for example, that there be no work at all during the period. Others permit some work. Retirees may be handled differently from one State to another.

Representative HAMILTON. So our unemployment system really doesn't cover a very large percentage of the unemployed people, does it?

Mrs. NORWOOD. I think it's designed really to cover those people who are strongly attached members of the labor force, experienced workers, persons who lost their last job.

Representative HAMILTON. Are we going to find any effect on the unemployment rate with the hiring of 480,000 workers for the census?

Mrs. NORWOOD. That's a lot of workers. I don't know whether it's going to be 480,000, but it's certainly going to be between 300,000 and 400,000-and-something.

I know that the Census Bureau finds that a lot of people come into the labor force, often people, by the way, who took the census 10 years ago and are retired or out of the labor force completely and come back into the labor force. That would certainly have an effect both on the labor force and on employment.

So we have established some very special arrangements with the Census Bureau to try to be sure that we can get that data as early as possible. It is very difficult for us, frankly, to collect data on the Federal Government. It's much easier to collect data from private business. The payroll periods are different. The information from the individual agencies goes to the Office of Personnel Management, and we collect the data from them.

We are making an exception to that procedure by going to the Census Bureau directly for this one very specific kind of event.

Representative HAMILTON. Would you expect a downward blip of some kind in the unemployment statistics because of all this hiring?

Mrs. NORWOOD. It's possible. It depends on whether these are people who have been working in other jobs and they are just taking on a secondary job for the Census Bureau. They would have been counted as in the labor force and employed before. As I'm sure you are aware, special legislation was passed to permit retirees to continue to receive their retirement benefits while they are taking the census. To the extent that those people come in, they would be people who had been out of the labor force before and are coming into the labor force.

So it depends on what that mix will be.

Mr. BREGGER. If I may add one point to this, unless a significant number of the unemployed are hired directly, it's highly unlikely that it would affect the unemployment rate at all because it takes a huge increase in the people coming out of the labor force to affect the unemployment levels or rates.

Representative HAMILTON. OK. You have recently released a "State and Regional Unemployment in 1989" report and it shows less divergence among the States than existed in 1988.

Is there anything about the regional unemployment patterns that stand out in your mind with respect to 1989?

Mrs. NORWOOD. I have always been impressed with the differences that exist geographically in the distribution of industries. You find that what happens to employment and unemployment is very often related to the particular location of different kinds of industries.

So you have the oil-producing areas in the Southwest. They have sort of recovered and begun to diversify their employment, so they are doing a little bit better.

You still have the area around the north-central part of the country with automobiles and related industries—metals and so on—and they are not doing terribly well.

Then you have the areas—the pockets really of high tech, which really were booming and now are beginning to come down some, like New England.

Representative HAMILTON. What State has the highest unemployment rate now and the lowest?

Mrs. NORWOOD. West Virginia had an 8.6 percent unemployment rate in 1989.

Representative HAMILTON. That's the highest?

Mrs. NORWOOD. Yes. It replaced Louisiana. And the lowest was Hawaii at 2.6 percent.

But the range between the top and the bottom has been narrowing.

Representative HAMILTON. Now let's turn to the inflation index. In January, prices rose 1.1 percent, which is the largest 1-month increase since June 1982, due to higher food and energy prices principally I think.

Do you have evidence that food and energy prices have now begun to decline? Do you have any evidence of that?

Mrs. NORWOOD. Not yet, I don't think.

Mr. ARMKNECHT. The price releases will be coming out next week, but some of the information available in the private sector indicates that particularly the fuel oil costs that had risen very rapidly in December and January have fallen back in February.

So there is evidence that some of the energy prices have rolled back.

Representative HAMILTON. How about food?

Mr. ARMKNECHT. So far, we don't have any clear information on that.

Representative HAMILTON. If you exclude food and energy, then you had a 0.6 percent increase in January. Is that due to temporary factors, or how do you explain that?

Mrs. NORWOOD. It's part of both. There was lodging out of town that's a one time—college tuition is a one-time kind of thing.

Representative HAMILTON. Do you see any acceleration of inflation in the January figures?

Mrs. NORWOOD. We are always concerned when we see the index, excluding food and energy, also going up. Food and energy are clearly special kinds of factors. I do think, though, that we should recognize that when anything goes up people are paying higher prices.

Representative HAMILTON. But if you look at the Producer Price Index and exclude food and energy, then it rose only 0.1 percent.

Mrs. NORWOOD. Yes.

Representative HAMILTON. So which of the two figures give you a better preview of inflation?

Mr. ARMKNECHT. The difference between the CPI and the Producer Price Index is the Producer Price Index includes primarily commodities, whereas the CPI also includes services, and much of

the difference is due to the fact that if you look at the CPI, excluding food and energy, and the commodities and services break, you see the commodities in the CPI rose at 0.4 percent and services rose at 0.7 percent. So the services in the CPI were what were causing the larger increase.

Representative HAMILTON. What does an economist look at to get the best feel for inflation? Which one of the two indexes?

Mrs. NORWOOD. I think that they look at them all together.

Representative HAMILTON. Which do you put the most weight on?

Mrs. NORWOOD. Well, they measure different things. You're looking at different stages of production. You get a bit worried if the intermediate group of producer prices goes way up because you know that that will eventually—generally, unless there are special circumstances, go into finished products.

Representative HAMILTON. Does either one of them have a better record of predicting inflation or would it vary?

Mrs. NORWOOD. I think they are generally fairly close.

Representative HAMILTON. Neither one stands out in your mind anyway as a preview of inflation? That's the point I really want to make.

Mrs. NORWOOD. I would look at both of them, but Mr. Armknecht may have a different view.

Representative HAMILTON. I just wondered if either one of them is a good indicator, or a better indicator.

Mrs. NORWOOD. Over the last year, if you look at it January to January, and that includes that big January number, they both went up more than 5 percent and the CPI was 5.2 percent and the PPI was 5.8 percent over the year.

Before that, in 1989, it was 4.6 and 4.8 percent over the year. So they are relatively close, but there are some differences and I think that Mr. Armknecht has made the important point; and that is that it's services that's driving employment; it's services that's driving wage increases; and it's services that probably are having a big effect on price increases because of the competitiveness that exists now, particularly in our goods-producing sales abroad.

Representative HAMILTON. Is there any evidence that productivity is improving in the service-producing sectors of the economy?

Mrs. NORWOOD. The service-producing sector is made up of a large number of individual industries. Some of them are very labor intensive. Some of them do not have very large productivity rates of growth. Others within the sector are quite technologically advanced and continue to make improvements.

So it's a little bit difficult to characterize the entire sector. If we look at the major groups that BLS puts out data for, you really look at the whole business economy or the nonfarm economy.

Representative HAMILTON. So you don't see anything in there to indicate that productivity is improving in the service-producing sectors?

Mrs. NORWOOD. Mr. Dean, our expert, tells me no.

Representative HAMILTON. It's normal for productivity growth to slow down as an expansion lengthens, right?

Mrs. NORWOOD. Yes.

Representative HAMILTON. If we have no recession this year or next and you keep the 5.2 or 5.3 percent unemployment rate, would you then expect the slow productivity growth to continue?

Mrs. NORWOOD. As the economy expands—yes, except that there's always the possibility of new technological developments. There is certainly a lot of attention being paid to research and development these days. So it's really rather hard to predict, but clearly at the beginning of a recovery period there is a bit of a lag as people are hired back and then output goes up, and then as the expansion lengthens out, productivity growth just tends to peter out a bit.

Obviously, productivity is one of the major issues for this country and many employers today are paying a great deal of attention to the way in which they manage their labor forces in order to try to make better use of the workers that they have.

Representative HAMILTON. Why is productivity slowing down?

Mrs. NORWOOD. We know something about that, but we do not have all of the answers and I think I'd like to ask Mr. Dean if he would like to comment on that.

Mr. DEAN. Productivity really performed rather well if you look at the period since the recession of 1982. The fact that it slowed down in the last year or two really has to be considered a normal phenomenon in view of the tight labor markets and the relatively low unemployment rate that we have.

Mrs. NORWOOD. I should tell you, Mr. Chairman, that there is——

Representative HAMILTON. Well, what's your judgment with respect to that question I asked? If you don't get any recession and your unemployment rate stays about the same for the next year or two, what would you anticipate in the way of productivity growth?

Mr. DEAN. Short of the unexpected improvements in technology that the Commissioner referred to, there is no reason to think at this phase of the business cycle that there would be a rebound in productivity over the next year.

Representative HAMILTON. Is there reason to think it would drop further?

Mr. DEAN. Not necessarily. It could stay at about the current level for many quarters.

Representative HAMILTON. OK. Thank you very much.

We stand adjourned.

[Whereupon, at 10:05 a.m., the committee adjourned, subject to the call of the Chair.]

EMPLOYMENT-UNEMPLOYMENT

FRIDAY, MAY 4, 1990

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, DC.

The committee met, pursuant to notice, at 9:30 a.m., in room 2359, Rayburn House Office Building, Hon. Lee H. Hamilton (chairman of the committee) presiding.

Present: Representative Hamilton.

Also present: William Buechner, professional staff member.

OPENING STATEMENT OF REPRESENTATIVE HAMILTON, CHAIRMAN

Representative HAMILTON. The Joint Economic Committee will come to order.

We're pleased to welcome Commissioner Janet Norwood of the Bureau of Labor Statistics for her monthly appearance before the committee to discuss the current employment and unemployment situation.

This morning, Commissioner Norwood will testify on the labor market data for April. Recently, the Bureau of Labor Statistics released data pertaining to the current situation with inflation, and the committee hopes to discuss these data with Commissioner Norwood as well.

We will now hear from Commissioner Norwood, and then have a few questions.

You may proceed.

STATEMENT OF HON. JANET L. NORWOOD, COMMISSIONER, BUREAU OF LABOR STATISTICS, DEPARTMENT OF LABOR, ACCOMPANIED BY KENNETH V. DALTON, ASSOCIATE COMMISSIONER, OFFICE OF PRICES AND LIVING CONDITIONS; AND THOMAS J. PLEWES, ASSOCIATE COMMISSIONER, OFFICE OF EMPLOYMENT AND UNEMPLOYMENT STATISTICS

Mrs. NORWOOD. Thank you very much, Mr. Chairman.

As always, Tom Plewes and Ken Dalton are here at the table with me. And we're very pleased to be here.

Employment was weak in April, and unemployment edged up. Both the jobless rate for civilian workers, at 5.4 percent, and the overall unemployment rate, at 5.3 percent, were close to the rates that have prevailed over the last year and a half.

Neither the household nor the business survey showed significant employment change from March to April, despite the contin-

ued hiring of workers for the decennial census. Taken together, the data for the past 2 months appear to paint a very weak employment picture, in which the number of jobs may seem to have plateaued. This weakness, however, follows especially strong growth in January and February because of the unusually good weather during those months. That large growth early in the year probably overstated employment strength and may have contributed to the weaker data that we're now seeing. One way of looking at the entire 4 months is that the employment growth, with Federal Government hiring factored out, averaged about 175,000 a month. This compares with a monthly average of slightly more than 200,000 in 1989 and 275,000 in 1988. This kind of slower employment growth is not particularly surprising after more than 7 years of business expansion. But we'll need data for another month or two to understand recent labor market developments more fully. In any case, what does seem clear is that the goods-producing sector has seen reduced employment during the past year and job increases in many of the service-sector industries have slowed recently.

Employment in the construction industry declined by 100,000 in April after seasonal adjustment, adding to March's loss of 50,000 jobs. Earlier in the year, however, our numbers showed very large job gains—totaling 180,000 in January and February—because of the unusually mild weather which made it possible to sustain construction activity that would normally have been curtailed. Therefore, relatively few new hires occurred in March and April, because construction firms had not made their normal winter layoffs. Indeed, if we go all the way back to last fall, before the series of large month-to-month changes, we see that the construction industry's job level was about where it is now. Thus, the underlying trend so far this year for construction has been quite flat.

The situation in the Nation's factories is quite different. With the small loss in April, employment in manufacturing has now declined in 12 of the last 13 months, with a net reduction of nearly 300,000 jobs. Machinery was particularly hard hit in April, although the weakness was, and has been, widely distributed across the manufacturing industries. Factory hours and overtime were also down over the month.

In the service-producing sector, none of the major industry divisions registered a significant employment gain from March to April except for government which was buoyed by the hiring of temporary census workers. The services industry itself showed hardly any employment change, as continued expansion in health services was offset by small losses in business services and elsewhere in the industry. This slowdown probably should be viewed in a longer context, however. The average monthly employment increase during the first quarter was a brisk 120,000.

Employment growth in retail trade started to slow down last spring and continued to be sluggish throughout the balance of 1989. After a strong rebound in January of this year, the number of jobs in this industry has changed very little.

Despite the slowed pace of job creation, the unemployment rate has fluctuated only slightly within a very narrow range for some time now. One reason that this has been possible is the slowdown that has occurred in the rate of labor force growth. In fact, right

now, we're near the 1.2 percent annual labor force growth rate that BLS has projected for the period between 1988 and the year 2000. This compares with growth as high as 3 percent in the late 1970's, and 1.5 percent in the mid-to-late 1980's.

I do not believe that April's two-tenths unemployment rate increase signals a change in the jobless situation. I say that for two reasons. First, the April jobless rate follows a downtick in March and remains very close to the rate that has prevailed over the last year and a half. Second, thus far, we can discern no meaningful change in the measures that might signal a deteriorating unemployment situation. In particular, neither the number of newly unemployed, that is, those jobless less than 5 weeks, nor the number of job losers has started to climb. We have, however, seen an inching up of the unemployment rates for factory and construction workers and, in some cases, rising unemployment in particular parts of the country.

In summary, the recent months' data suggest that job growth continues to be slow. Employment weakness began, and has been most severe, in manufacturing. The number of construction jobs in April was about at the level of last fall, and employment in the service sector seems less buoyant than before. Nevertheless, unemployment has changed very little in recent months, and the porportion of the population with jobs, although down over the month, remains quite high.

Mr. Chairman, we'd be glad to try to answer any questions you may have.

[The table attached to Mrs. Norwood's statement, together with the Employment Situation press release, follows:]

Unemployment rates of all civilian workers by alternative seasonal adjustment methods

Month and year	Unadjusted rate	X-11 ARIMA method						X-11 method (official method before 1980)	Range (cols. 2-8)
		Official procedure	Concurrent (as first computed)	Concurrent (revised)	Stable	Total	Residual		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1989									
April.....	5.1	5.3	5.3	5.3	5.3	5.2	5.3	5.3	.1
May.....	5.0	5.2	5.2	5.2	5.2	5.2	5.2	5.1	.1
June.....	5.5	5.3	5.3	5.3	5.2	5.3	5.3	5.3	.1
July.....	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
August.....	5.1	5.3	5.3	5.2	5.2	5.3	5.2	5.2	.1
September...	5.1	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
October.....	5.0	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
November....	5.2	5.3	5.3	5.3	5.4	5.4	5.4	5.4	.1
December....	5.1	5.3	5.3	5.3	5.3	5.4	5.4	5.4	.1
1990									
January.....	5.9	5.3	5.3	5.3	5.3	5.3	5.3	5.3	-
February....	5.8	5.3	5.3	5.3	5.3	5.3	5.2	5.3	.1
March.....	5.4	5.2	5.2	5.3	5.2	5.2	5.1	5.2	.2
April.....	5.2	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-

SOURCE: U.S. DEPARTMENT OF LABOR
Bureau of Labor Statistics
May 1990

(1) Unadjusted rate. Unemployment rate for all civilian workers, not seasonally adjusted.

(2) Official procedure (X-11 ARIMA method). The published seasonally adjusted rate for all civilian workers. Each of the 3 major civilian labor force components—agricultural employment, nonagricultural employment and unemployment—for 4 age-sex groups—males and females, ages 16-19 and 20 years and over—are seasonally adjusted independently using data from January 1975 forward. The data series for each of these 12 components are extended by a year at each end of the original series using ARIMA (Auto-Regressive, Integrated, Moving Average) models chosen specifically for each series. Each extended series is then seasonally adjusted with the X-11 portion of the X-11 ARIMA program. The 4 teenage unemployment and nonagricultural employment components are adjusted with the additive adjustment model, while the other components are adjusted with the multiplicative model. The unemployment rate is computed by summing the 4 seasonally adjusted unemployment components and calculating that total as a percent of the civilian labor force total derived by summing all 12 seasonally adjusted components. All the seasonally adjusted series are revised at the end of each year. Extrapolated factors for January-June are computed at the beginning of each year; extrapolated factors for July-December are computed in the middle of the year after the June data become available. Each set of 6-month factors are published in advance, in the January and July issues, respectively, of Employment and Earnings.

(3) Concurrent (as first computed, X-11 ARIMA method). The official procedure for computation of the rate for all civilian workers using the 12 components is followed except that extrapolated factors are not used at all. Each component is seasonally adjusted with the X-11 ARIMA program each month as the most recent data become available. Rates for each month of the current year are shown as first computed; they are revised only once each year, at the end of the year when data for the full year become available. For example, the rate for January 1985 would be based, during 1985, on the adjustment of data from the period January 1975 through January 1985.

(4) Concurrent (revised, X-11 ARIMA method). The procedure used is identical to (3) above, and the rate for the current month (the last month displayed) will always be the same in the two columns. However, all previous months are subject to revision each month based on the seasonal adjustment of all the components with data through the current month.

(5) Stable (X-11 ARIMA method). Each of the 12 civilian labor force components is extended using ARIMA models as in the official procedure and then run through the X-11 part of the program using the stable option. This option assumes that seasonal patterns are basically constant from year-to-year and computes final seasonal factors as unweighted averages of all the seasonal-irregular components for each month across the entire span of the period adjusted. As in the official procedure, factors are extrapolated in 6-month intervals and the series are revised at the end of each year. The procedure for computation of the rate from the seasonally adjusted components is also identical to the official procedure.

(6) Total (X-11 ARIMA method). This is one alternative aggregation procedure, in which total unemployment and civilian labor force levels are extended with ARIMA models and directly adjusted with multiplicative adjustment models in the X-11 part of the program. The rate is computed by taking seasonally adjusted total unemployment as a percent of seasonally adjusted total civilian labor force. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(7) Residual (X-11 ARIMA method). This is another alternative aggregation method, in which total civilian employment and civilian labor force levels are extended using ARIMA models and then directly adjusted with multiplicative adjustment models. The seasonally adjusted unemployment level is derived by subtracting seasonally adjusted employment from seasonally adjusted labor force. The rate is then computed by taking the derived unemployment level as a percent of the labor force level. Factors are extrapolated in 6-month intervals and the series revised at the end of each year.

(8) X-11 method (official method before 1980). The method for computation of the official procedure is used except that the series are not extended with ARIMA models and the factors are projected in 12-month intervals. The standard X-11 program is used to perform the seasonal adjustment.

Methods of Adjustment: The X-11 ARIMA method was developed at Statistics Canada by the Seasonal Adjustment and Times Series Staff under the direction of Estela Bee Dagum. The method is described in The X-11 ARIMA Seasonal Adjustment Method, by Estela Bee Dagum, Statistics Canada Catalogue No. 12-564E, February 1980.

The standard X-11 method is described in X-11 Variant of the Census Method II Seasonal Adjustment Program, by Julius Shiskin, Allan Young and John Musgrave (Technical Paper No. 15, Bureau of the Census, 1967).

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THE EMPLOYMENT SITUATION: APRIL 1990

Unemployment edged up in April and the number of payroll jobs was about unchanged, the Bureau of Labor Statistics of the U.S. Department of Labor reported today. The overall jobless rate of 5.3 percent and the civilian worker rate of 5.4 percent were both up by 0.2 percentage point from the previous month but remained within the narrow range that has prevailed for the past year and a half.

Payroll employment, as measured by the survey of nonfarm business establishments, was virtually unchanged at 110.5 million in April, after seasonal adjustment, despite the addition of 80,000 temporary census workers. Total civilian employment, as measured by the survey of households, fell slightly to a seasonally adjusted level of 118.1 million.

Unemployment (Household Survey Data)

Both the number of unemployed persons and the civilian worker unemployment rate edged up in April, reaching 6.8 million and 5.4 percent, respectively. Most of the increased joblessness occurred among 20-24 year-olds. Among the major worker groups, the unemployment rate for adult men rose 0.3 percentage point to 4.8 percent, as did the rate for whites. Jobless rates for adult women (4.8 percent), teenagers (14.7 percent), blacks (10.4 percent), and Hispanics (8.0 percent) were little changed over the month. (See tables A-2, A-3, and A-9.)

Both the mean and median duration of unemployment, at 12.1 and 5.0 weeks, respectively, were about unchanged in April. The number working part time for economic reasons--often referred to as underemployed workers--was also about unchanged, at 4.9 million. (See tables A-7 and A-4.)

Civilian Employment and the Labor Force (Household Survey Data)

Total civilian employment declined slightly in April to a seasonally adjusted level of 118.1 million. As a result, the proportion of the working-age population that is employed (the employment-population ratio) edged down to 62.9 percent in April, the same as a year earlier. (See table A-2.)

The civilian labor force, 124.9 million, and the labor force participation rate, 66.5 percent, were little changed over the month. Over

Table A. Major indicators of labor market activity, seasonally adjusted

Category	Quarterly averages		Monthly data			Mar.-Apr. change
	1989	1990	1990			
	IV	I	Feb.	Mar.	Apr.	
HOUSEHOLD DATA	Thousands of persons					
Labor force 1/.....	126,098	126,300	126,308	126,498	126,543	45
Total employment 1/.	119,474	119,758	119,713	120,003	119,773	-230
Civilian labor force..	124,394	124,619	124,630	124,829	124,886	57
Civilian employment.	117,770	118,077	118,035	118,334	118,116	-218
Unemployment.....	6,624	6,541	6,594	6,495	6,770	275
Not in labor force....	62,624	62,793	62,782	62,700	62,783	83
Discouraged workers.	827	747	N.A.	N.A.	N.A.	N.A.
	Percent of labor force					
Unemployment rates:						
All workers 1/.....	5.3	5.2	5.2	5.1	5.3	0.2
All civilian workers	5.3	5.2	5.3	5.2	5.4	.2
Adult men.....	4.6	4.6	4.6	4.5	4.8	.3
Adult women.....	4.8	4.7	4.8	4.7	4.8	.1
Teenagers.....	15.2	14.5	14.8	14.4	14.7	.3
White.....	4.5	4.6	4.6	4.5	4.8	.3
Black.....	11.8	10.8	10.5	10.6	10.4	-.2
Hispanic origin...	8.1	7.5	7.8	7.7	8.0	.3
ESTABLISHMENT DATA	Thousands of jobs					
Nonfarm employment....	109,398	p110,214	110,304	p110,407	p110,471	p64
Goods-producing.....	25,581	p25,603	25,686	p25,604	p25,489	p-115
Service-producing...	83,816	p84,611	84,618	p84,803	p84,982	p179
	Hours of work					
Average weekly hours:						
Total private.....	34.6	p34.6	34.6	p34.6	p34.6	p.0
Manufacturing.....	40.7	p40.7	40.7	p40.8	p40.6	p-0.2
Overtime.....	3.7	p3.7	3.6	p3.7	p3.5	p-.2

1/ Includes the resident Armed Forces. p=preliminary.
N.A.=not available.

the past year, the labor force has expanded by only 1.2 million, with adult women accounting for three-fourths of the gain. (See table A-2.)

Industry Payroll Employment (Establishment Survey Data)

Total nonfarm employment, at 110.5 million in April, was little changed for the second consecutive month. In the goods-producing sector, employment fell by 115,000, after seasonal adjustment. Service sector jobs rose by 180,000, but nearly half of the increase occurred in Federal government, reflecting the additional hiring of temporary workers to assist with the 1990 census. Excluding the Federal government, job growth has averaged 175,000 a month so far in 1990, down slightly from the pace of 1989. (See table B-1.)

Construction employment fell by 100,000, after seasonal adjustment. After large fluctuations in seasonally adjusted employment, reflecting a winter marked by unusual weather, the April count of construction jobs was about the same as that recorded last fall. Manufacturing employment showed further weakness; the decline was concentrated in the durable goods component, with the largest job loss occurring in the machinery industry. In nondurable goods, an increase of nearly 10,000 in apparel reflected the return from March layoffs. Factory jobs have decreased by 280,000 over the past 13 months. Mining employment increased slightly in April; since the beginning of 1989, mining jobs have risen by 45,000, mostly in oil and gas extraction.

In the service-producing sector, the number of government employees increased by 130,000, as an estimated 80,000 temporary census workers were added to the payrolls, bringing the total hired thus far to nearly 200,000. Elsewhere, job gains were quite modest. Employment in retail trade and in transportation and public utilities was unchanged. Within the finance, insurance, and real estate industry, a small gain in insurance was offset by a decline in real estate. After strong growth in the first quarter, employment in the services industry was about unchanged overall, even though the health services component added another 45,000 jobs.

Weekly Hours (Establishment Survey Data)

The average workweek for production or nonsupervisory workers on private nonfarm payrolls was unchanged in April at 34.6 hours, seasonally adjusted. In manufacturing, the workweek declined 0.2 hour to 40.6 hours, and factory overtime also fell 0.2 hour to 3.5 hours. (See table B-2.)

The index of aggregate weekly hours of private production or nonsupervisory workers was about unchanged in April at 130.2 (1977=100), after seasonal adjustment. The index for manufacturing declined by 0.5 percent to 93.9, and the construction index fell 4.6 percent to 139.9. (See table B-5.)

Hourly and Weekly Earnings (Establishment Survey Data)

Both hourly and weekly earnings of production or nonsupervisory workers on private nonfarm payrolls rose 0.3 percent in April, on a seasonally adjusted basis. Prior to seasonal adjustment, average hourly earnings rose 4 cents to $9.97 and average weekly earnings advanced $2.38 to $343.97. Over the year, average hourly earnings rose 3.6 percent and weekly earnings were up 2.7 percent. (See tables B-3 and B-4.)

Note on Establishment Survey Data

Establishment survey data will be revised based on new benchmark levels with the release of August data in September, to incorporate the introduction of the 1987 Standard Industrial Classification codes.

The Employment Situation for May 1990 will be released on Friday, June 1, at 8:30 A.M. (EDT).

33-012 O - 90 - 4

Explanatory Note

This news release presents statistics from two major surveys, the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey). The household survey provides the information on the labor force, total employment, and unemployment that appears in the A tables, marked HOUSEHOLD DATA. It is a sample survey of about 60,000 households that is conducted by the Bureau of the Census with most of the findings analyzed and published by the Bureau of Labor Statistics (BLS).

The establishment survey provides the information on the employment, hours, and earnings of workers on nonagricultural payrolls that appears in the B tables, marked ESTABLISHMENT DATA. This information is collected from payroll records by BLS in cooperation with State agencies. The sample includes over 300,000 establishments employing over 38 million people.

For both surveys, the data for a given month are actually collected for and relate to a particular week. In the household survey, unless otherwise indicated, it is the calendar week that contains the 12th day of the month, which is called the survey week. In the establishment survey, the reference week is the pay period including the 12th, which may or may not correspond directly to the calendar week.

The data in this release are affected by a number of technical factors, including definitions, survey differences, seasonal adjustments, and the inevitable variance in results between a survey of a sample and a census of the entire population. Each of these factors is explained below.

Coverage, definitions, and differences between surveys

The sample households in the household survey are selected so as to reflect the entire civilian noninstitutional population 16 years of age and older. Each person in a household is classified as employed, unemployed, or not in the labor force. Those who hold more than one job are classified according to the job at which they worked the most hours.

People are classified as *employed* if they did any work at all as paid civilians; worked in their own business or profession or on their own farm; or worked 15 hours or more in an enterprise operated by a member of their family, whether they were paid or not. People are also counted as employed if they were on unpaid leave because of illness, bad weather, disputes between labor and management, or personal reasons. Members of the Armed Forces stationed in the United States are also included in the employed total.

People are classified as *unemployed*, regardless of their eligibility for unemployment benefits or public assistance, if they meet all of the following criteria: They had no employment during the survey week; they were available for work at that time; and they made specific efforts to find employment sometime during the prior 4 weeks. Persons laid off from their former jobs and awaiting recall and those expecting to report to a job within 30 days need not be looking for work to be counted as unemployed.

The *labor force* equals the sum of the number employed and the number unemployed. The *unemployment rate* is the percentage of unemployed people in the labor force (civilian plus the resident Armed Forces). Table A-5 presents a special grouping of seven measures of unemployment based on varying definitions of unemployment and the labor force. The definitions are provided in the table. The most restrictive definition yields U-1 and the most comprehensive yields U-7. The overall unemployment rate is U-5a, while U-5b represents the same measure with a civilian labor force base.

Unlike the household survey, the establishment survey only counts wage and salary employees whose names appear on the payroll records of nonagricultural firms. As a result, there are many differences between the two surveys, among which are the following:

— The household survey, although based on a smaller sample, reflects a larger segment of the population; the establishment survey excludes agriculture, the self-employed, unpaid family workers, private household workers, and members of the resident Armed Forces;

— The household survey includes people on unpaid leave among the employed; the establishment survey does not;

— The household survey is limited to those 16 years of age and older; the establishment survey is not limited by age;

— The household survey has no duplication of individuals, because each individual is counted only once; in the establishment survey, employees working at more than one job or otherwise appearing on more than one payroll would be counted separately for each appearance.

Other differences between the two surveys are described in "Comparing Employment Estimates from Household and Payroll Surveys," which may be obtained from the BLS upon request.

Seasonal adjustment

Over the course of a year, the size of the Nation's labor force and the levels of employment and unemployment undergo sharp fluctuations due to such seasonal events as changes in weather, reduced or expanded production, harvests, major holidays, and the opening and closing of schools. For example, the labor force increases by a large number each June, when schools close and many young people enter the job market. The effect of such seasonal variation can be very large; over the course of a year, for example, seasonality may account for as much as 95 percent of the month-to-month changes in unemployment.

Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make nonseasonal developments, such as declines in economic activity or increases in the participation of women in the labor force, easier to spot. To return to the school's-out example, the large number of people entering the labor force each June is likely to obscure any other changes that have taken place since May, making it difficult to determine if the level of economic activity has risen or declined. However, because the effect of students finishing school in previous years is known, the statistics for the current year can be adjusted to allow for a comparable change. Insofar as the seasonal adjustment is made correctly, the adjusted figure provides a more useful tool with which to analyze changes in economic activity.

Measures of labor force, employment, and unemployment contain components such as age and sex. Statistics for all employees, production workers, average weekly hours, and average hourly earnings include components based on the employer's industry. All these statistics can be seasonally adjusted either by adjusting the total or by adjusting each of the components and combining them. The second procedure usually yields more accurate information and is therefore followed by BLS. For example, the seasonally adjusted figure for the labor force is the sum of eight seasonally adjusted civilian employment components, plus the resident Armed Forces total (not adjusted for seasonality), and four seasonally adjusted unemployment components; the total for unemployment is the sum of the four unemployment components; and the overall unemployment rate is derived by dividing the resulting estimate of total unemployment by the estimate of the labor force.

The numerical factors used to make the seasonal adjustments are recalculated regularly. For the household survey, the factors are calculated for the January–June period and again for the July–December period. For the establishment survey, updated factors for seasonal adjustment are calculated for 6 months, along with the introduction of new benchmarks, which are discussed at the end of the next section, and again with the release of data for October. In both surveys, revisions to data published over the previous 5 years are made once a year.

Sampling variability

Statistics based on the household and establishment surveys are subject to sampling error; that is, the estimate of the number of people employed and the other estimates drawn from these surveys probably differ from the figures that would be obtained from a complete census, even if the same questionnaires and procedures were used. In the household survey, the amount of the differences can be expressed in terms of standard errors. The numerical value of a standard error depends upon the size of the sample, the results of the survey, and other factors. However, the numerical value is always such that the chances are approximately 68 out of 100 that an estimate based on the sample will differ by no more than the standard error from the results of a complete census. The chances are approximately 90 out of 100 that an estimate based on the sample will differ by no more than 1.6 times the standard error from the results of a complete census. At approximately the 90-percent level of confidence—the confidence limits used by BLS in its analyses—the error for the monthly change in total employment is on the order of plus or minus 358,000; for total unemployment it is 224,000; and, for the overall unemployment rate, it is 0.19 percentage point. These figures do not mean that the sample results are off by these magnitudes but, rather, that the chances are approximately 90 out of 100 that the "true" level or rate would not be expected to differ from the estimates by more than these amounts.

Sampling errors for monthly surveys are reduced when the data are cumulated for several months, such as quarterly or annually. Also, as a general rule, the smaller the estimate, the larger the sampling error. Therefore, relatively speaking, the estimate of the size of the labor force is subject to less error than is the estimate of the number unemployed. And, among the unemployed, the sampling error for the jobless rate of adult men, for example, is much smaller than is the error for the jobless rate of teenagers. Specifically, the error on monthly change in the jobless rate for men is .25 percentage point; for teenagers, it is 1.29 percentage points.

In the establishment survey, estimates for the 2 most current months are based on incomplete returns; for this reason, these estimates are labeled preliminary in the tables. When all the returns in the sample have been received, the estimates are revised. In other words, data for the month of September are published in preliminary form in October and November and in final form in December. To remove errors that build up over time, a comprehensive count of the employed is conducted each year. The results of this survey are used to establish new benchmarks—comprehensive counts of employment—against which month-to-month changes can be measured. The new benchmarks also incorporate changes in the classification of industries and allow for the formation of new establishments.

Additional statistics and other information

In order to provide a broad view of the Nation's employment situation, BLS regularly publishes a wide variety of data in this news release. More comprehensive statistics are contained in *Employment and Earnings*, published each month by BLS. It is available for $8.50 per issue or $25.00 per year from the U.S. Government Printing Office, Washington, D.C., 20201. A check or money order made out to the Superintendent of Documents must accompany all orders.

Employment and Earnings also provides approximations of the standard errors for the household survey data published in this release. For unemployment and other labor force categories, the standard errors appear in tables B through J of its "Explanatory Notes." Measures of the reliability of the data drawn from the establishment survey and the actual amounts of revision due to benchmark adjustments are provided in tables M, O, P, and Q of that publication.

HOUSEHOLD DATA

Table A-1. Employment status of the population, including Armed Forces in the United States, by sex

(Numbers in thousands)

Employment status and sex	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
TOTAL									
Noninstitutional population[2]	187,708	189,198	189,326	187,708	188,865	188,990	189,090	189,198	189,326
Labor force[3]	124,260	125,458	125,473	125,299	126,246	126,094	126,308	126,498	126,543
Participation rate[4]	66.2	66.3	66.3	66.8	66.8	66.7	66.8	66.9	66.8
Total employed[5]	118,031	118,762	119,016	118,768	119,586	119,560	119,713	120,003	119,773
Employment-population ratio[4]	62.9	62.8	62.9	63.3	63.3	63.3	63.3	63.4	63.3
Resident Armed Forces	1,684	1,699	1,657	1,684	1,700	1,697	1,678	1,669	1,657
Civilian employed	116,347	117,093	117,359	117,084	117,886	117,863	118,035	118,334	118,116
Agriculture	3,116	2,936	3,102	3,144	3,197	3,134	3,079	3,200	3,133
Nonagricultural industries	113,231	114,155	114,257	113,940	114,691	114,728	114,957	115,133	114,983
Unemployed	6,229	6,697	6,457	6,531	6,658	6,535	6,594	6,495	6,770
Unemployment rate[6]	5.0	5.3	5.1	5.2	5.3	5.2	5.2	5.1	5.3
Not in labor force	63,448	63,740	63,853	62,409	62,619	62,896	62,782	62,700	62,783
Men, 16 years and over									
Noninstitutional population[2]	90,094	90,874	90,942	90,094	90,678	90,772	90,822	90,874	90,942
Labor force[3]	68,684	69,080	69,158	69,293	69,725	69,539	69,639	69,712	69,779
Participation rate[4]	76.2	76.0	76.0	76.9	76.9	76.6	76.7	76.7	76.7
Total employed[5]	65,185	65,232	65,492	65,727	66,143	65,943	66,106	66,206	66,043
Employment-population ratio[4]	72.4	71.8	72.0	73.0	72.9	72.6	72.8	72.9	72.6
Resident Armed Forces	1,521	1,497	1,499	1,521	1,525	1,523	1,506	1,497	1,499
Civilian employed	63,664	63,735	63,993	64,206	64,618	64,420	64,602	64,711	64,544
Unemployed	3,499	3,847	3,666	3,566	3,582	3,597	3,530	3,505	3,735
Unemployment rate[6]	5.1	5.6	5.3	5.1	5.1	5.2	5.1	5.0	5.4
Women, 16 years and over									
Noninstitutional population[2]	97,614	98,324	98,383	97,614	98,187	98,218	98,268	98,324	98,383
Labor force[3]	55,576	56,379	56,315	56,006	56,521	56,555	56,669	56,785	56,764
Participation rate[4]	56.9	57.3	57.2	57.4	57.6	57.6	57.7	57.8	57.7
Total employed[5]	52,846	53,529	53,524	53,041	53,445	53,617	53,605	53,795	53,729
Employment-population ratio[4]	54.1	54.4	54.4	54.3	54.4	54.6	54.5	54.7	54.6
Resident Armed Forces	163	172	158	163	175	174	172	172	158
Civilian employed	52,683	53,357	53,366	52,878	53,270	53,443	53,433	53,623	53,571
Unemployed	2,730	2,849	2,790	2,965	3,076	2,938	3,064	2,990	3,034
Unemployment rate[6]	4.9	5.1	5.0	5.3	5.4	5.2	5.4	5.3	5.3

[1] The population and Armed Forces figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Includes members of the Armed Forces stationed in the United States.

[3] Labor force as a percent of the noninstitutional population.

[4] Total employment as a percent of the noninstitutional population.

[5] Unemployment as a percent of the labor force (including the resident Armed Forces).

HOUSEHOLD DATA

Table A-2. Employment status of the civilian population by sex and age

(Numbers in thousands)

Employment status, sex, and age	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
TOTAL									
Civilian noninstitutional population	186,024	187,529	187,669	186,024	187,165	187,293	187,412	187,529	187,669
Civilian labor force	122,576	123,789	123,816	123,615	124,546	124,397	124,630	124,829	124,886
Participation rate	65.9	66.0	66.0	66.5	66.5	66.4	66.5	66.6	66.5
Employed	116,347	117,093	117,359	117,084	117,888	117,863	118,035	118,334	118,116
Employment-population ratio[1]	62.5	62.4	62.5	62.9	63.0	62.9	63.0	63.1	62.9
Unemployed	6,229	6,697	6,457	6,531	6,658	6,535	6,594	6,495	6,770
Unemployment rate	5.1	5.4	5.2	5.3	5.3	5.3	5.3	5.2	5.4
Men, 20 years and over									
Civilian noninstitutional population	81,413	82,378	82,487	81,413	82,055	82,168	82,248	82,378	82,487
Civilian labor force	63,370	63,932	63,980	63,638	64,071	63,958	64,101	64,183	64,251
Participation rate	77.8	77.6	77.6	78.2	78.1	77.8	77.9	77.9	77.9
Employed	60,430	60,654	60,848	60,716	61,154	60,976	61,172	61,270	61,138
Employment-population ratio[1]	74.2	73.6	73.8	74.6	74.5	74.2	74.4	74.4	74.1
Agriculture	2,277	2,125	2,263	2,270	2,293	2,269	2,254	2,268	2,258
Nonagricultural industries	58,154	58,530	58,585	58,446	58,861	58,706	58,918	59,002	58,879
Unemployed	2,940	3,277	3,132	2,922	2,917	2,983	2,929	2,913	3,113
Unemployment rate	4.6	5.1	4.9	4.6	4.6	4.7	4.6	4.5	4.8
Women, 20 years and over									
Civilian noninstitutional population	90,318	91,237	91,330	90,318	91,042	91,091	91,157	91,237	91,330
Civilian labor force	51,855	52,723	52,786	52,009	52,586	52,686	52,814	52,800	52,954
Participation rate	57.4	57.8	57.8	57.6	57.8	57.8	57.9	57.9	58.0
Employed	49,578	50,343	50,439	49,560	50,048	50,255	50,287	50,344	50,427
Employment-population ratio[1]	54.9	55.2	55.2	54.9	55.0	55.2	55.2	55.2	55.2
Agriculture	600	598	631	638	618	594	582	648	669
Nonagricultural industries	48,978	49,746	49,808	48,922	49,430	49,661	49,704	49,696	49,758
Unemployed	2,277	2,380	2,347	2,449	2,538	2,431	2,527	2,456	2,526
Unemployment rate	4.4	4.5	4.4	4.7	4.8	4.6	4.8	4.7	4.8
Both sexes, 16 to 19 years									
Civilian noninstitutional population	14,293	13,914	13,852	14,293	14,067	14,034	14,008	13,914	13,852
Civilian labor force	7,350	7,135	7,051	7,968	7,889	7,752	7,715	7,846	7,681
Participation rate	51.4	51.3	50.9	55.7	56.1	55.2	55.1	56.4	55.4
Employed	6,338	6,095	6,072	6,808	6,686	6,631	6,577	6,720	6,551
Employment-population ratio[1]	44.3	43.8	43.8	47.6	47.5	47.3	47.0	48.3	47.3
Agriculture	240	216	208	236	266	270	243	285	206
Nonagricultural industries	6,098	5,879	5,865	6,572	6,400	6,361	6,334	6,435	6,345
Unemployed	1,012	1,040	978	1,160	1,203	1,121	1,138	1,126	1,130
Unemployment rate	13.8	14.6	13.9	14.6	15.2	14.5	14.8	14.4	14.7

[1] Civilian employment as a percent of the civilian noninstitutional population.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

HOUSEHOLD DATA

Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
WHITE									
Civilian noninstitutional population	159,098	160,076	160,170	159,098	159,832	159,938	160,007	160,076	160,170
Civilian labor force	105,542	106,292	106,460	106,208	106,896	106,884	107,080	107,061	107,133
Participation rate	66.3	66.4	66.5	66.8	66.9	66.8	66.9	66.9	66.9
Employed	100,941	101,273	101,564	101,400	102,032	102,074	102,117	102,206	102,027
Employment-population ratio[2]	63.4	63.3	63.4	63.7	63.8	63.8	63.8	63.8	63.7
Unemployed	4,601	5,018	4,895	4,808	4,864	4,811	4,962	4,856	5,106
Unemployment rate	4.4	4.7	4.6	4.5	4.6	4.5	4.6	4.5	4.8
Men, 20 years and over									
Civilian labor force	55,207	55,633	55,663	55,374	55,747	55,771	55,815	55,828	55,826
Participation rate	78.3	78.1	78.0	78.5	78.5	78.4	78.4	78.4	78.3
Employed	53,033	53,111	53,265	53,199	53,580	53,560	53,547	53,593	53,425
Employment-population ratio[2]	75.2	74.6	74.7	75.5	75.5	75.3	75.2	75.2	74.9
Unemployed	2,173	2,521	2,398	2,175	2,167	2,211	2,266	2,235	2,400
Unemployment rate	3.9	4.5	4.3	3.9	3.9	4.0	4.1	4.0	4.3
Women, 20 years and over									
Civilian labor force	43,954	44,512	44,700	43,984	44,469	44,475	44,615	44,523	44,740
Participation rate	57.1	57.3	57.5	57.1	57.4	57.4	57.5	57.4	57.6
Employed	42,291	42,808	42,981	42,199	42,641	42,718	42,782	42,765	42,895
Employment-population ratio[2]	54.9	55.1	55.3	54.8	55.0	55.1	55.2	55.1	55.2
Unemployed	1,663	1,705	1,719	1,785	1,828	1,757	1,833	1,758	1,844
Unemployment rate	3.8	3.8	3.8	4.1	4.1	4.0	4.1	3.9	4.1
Both sexes, 16 to 19 years									
Civilian labor force	6,382	6,146	6,097	6,850	6,680	6,639	6,650	6,710	6,568
Participation rate	55.0	54.8	54.6	59.1	58.9	58.7	59.0	59.8	58.8
Employed	5,617	5,354	5,318	6,002	5,811	5,796	5,788	5,847	5,707
Employment-population ratio[2]	48.4	47.7	47.6	51.7	51.2	51.3	51.4	52.1	51.1
Unemployed	765	792	779	848	869	843	862	863	861
Unemployment rate	12.0	12.9	12.8	12.4	13.0	12.7	13.0	12.9	13.1
Men	12.7	13.8	13.3	13.2	14.0	12.9	12.7	13.0	13.8
Women	11.2	12.0	12.2	11.5	11.9	12.4	13.2	12.7	12.4
BLACK									
Civilian noninstitutional population	20,956	21,211	21,228	20,956	21,164	21,163	21,188	21,211	21,228
Civilian labor force	13,121	13,393	13,335	13,336	13,522	13,510	13,437	13,581	13,570
Participation rate	62.6	63.1	62.8	63.6	63.9	63.8	63.4	64.0	63.9
Employed	11,699	11,954	11,973	11,872	11,920	11,978	12,030	12,148	12,161
Employment-population ratio[2]	55.8	56.4	56.4	56.7	56.3	56.6	56.8	57.3	57.3
Unemployed	1,422	1,440	1,362	1,464	1,602	1,532	1,407	1,433	1,409
Unemployment rate	10.8	10.7	10.2	11.0	11.8	11.3	10.5	10.6	10.4
Men, 20 years and over									
Civilian labor force	6,165	6,193	6,216	6,188	6,244	6,189	6,172	6,227	6,240
Participation rate	73.9	73.1	73.4	74.2	74.0	73.5	73.3	73.6	73.7
Employed	5,515	5,558	5,589	5,576	5,569	5,496	5,603	5,631	5,651
Employment-population ratio[2]	66.1	65.7	66.0	66.9	66.0	65.2	66.6	66.5	66.8
Unemployed	650	635	627	612	675	693	569	596	589
Unemployment rate	10.5	10.3	10.1	9.9	10.8	11.2	9.2	9.6	9.4
Women, 20 years and over									
Civilian labor force	6,174	6,413	6,358	6,254	6,311	6,393	6,423	6,456	6,451
Participation rate	59.1	60.5	59.9	59.9	59.7	60.5	60.7	60.9	60.8
Employed	5,637	5,837	5,799	5,685	5,681	5,802	5,821	5,872	5,858
Employment-population ratio[2]	54.0	55.1	54.7	54.4	53.8	54.9	55.0	55.4	55.2
Unemployed	536	576	558	569	630	591	602	584	594
Unemployment rate	8.7	9.0	8.8	9.1	10.0	9.2	9.4	9.0	9.2
Both sexes, 16 to 19 years									
Civilian labor force	783	787	762	894	967	926	842	898	879
Participation rate	36.0	36.6	35.4	41.1	44.6	42.8	38.5	41.7	40.8
Employed	546	559	585	611	670	680	606	645	652
Employment-population ratio[2]	25.1	26.0	27.1	28.1	30.9	31.3	27.7	30.0	30.3
Unemployed	236	228	177	283	297	246	236	253	227
Unemployment rate	30.2	29.0	23.3	31.7	30.7	26.7	28.0	28.2	25.8
Men	33.6	30.5	24.7	34.8	30.1	29.2	28.5	30.0	27.2
Women	26.8	27.5	21.7	28.5	31.4	24.0	27.5	26.2	24.3

See footnotes at end of table.

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Table A-3. Employment status of the civilian population by race, sex, age, and Hispanic origin—Continued

(Numbers in thousands)

Employment status, race, sex, age, and Hispanic origin	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
HISPANIC ORIGIN									
Civilian noninstitutional population	13,690	14,159	14,198	13,690	14,019	14,080	14,119	14,159	14,198
Civilian labor force	9,210	9,466	9,535	9,288	9,495	9,440	9,400	9,565	9,618
Participation rate	67.3	66.9	67.2	67.8	67.7	67.0	66.6	67.6	67.7
Employed	8,461	8,752	8,770	8,531	8,691	8,769	8,666	8,831	8,850
Employment-population ratio[2]	61.8	61.8	61.8	62.3	62.0	62.3	61.4	62.4	62.3
Unemployed	749	713	765	757	804	671	734	734	768
Unemployment rate	8.1	7.5	8.0	8.2	8.5	7.1	7.8	7.7	8.0

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

Table A-4. Selected employment indicators

(In thousands)

Category	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
CHARACTERISTIC									
Civilian employed, 16 years and over	116,347	117,093	117,359	117,084	117,888	117,863	118,035	118,334	118,116
Married men, spouse present	40,726	40,784	40,608	40,857	41,041	40,982	41,347	40,989	40,730
Married women, spouse present	29,804	29,796	30,010	29,563	29,695	29,897	29,704	29,618	29,742
Women who maintain families	6,255	6,297	6,308	6,283	6,349	6,215	6,378	6,291	6,325
MAJOR INDUSTRY AND CLASS OF WORKER									
Agriculture:									
Wage and salary workers	1,608	1,489	1,593	1,630	1,677	1,634	1,578	1,620	1,621
Self-employed workers	1,385	1,349	1,400	1,414	1,369	1,354	1,375	1,457	1,429
Unpaid family workers	123	100	109	126	125	107	118	115	112
Nonagricultural industries:									
Wage and salary workers	104,301	105,230	105,258	104,981	105,643	105,747	106,117	106,029	105,938
Government	17,403	17,972	17,941	17,266	17,728	17,626	17,607	17,724	17,816
Private industries	86,898	87,258	87,317	87,715	87,915	88,121	88,510	88,306	88,122
Private households	1,091	950	930	1,118	1,077	1,035	1,021	1,003	957
Other industries	85,807	86,308	86,387	86,597	86,838	87,086	87,489	87,302	87,165
Self-employed workers	8,636	8,640	8,725	8,643	8,653	8,733	8,628	8,852	9,716
Unpaid family workers	293	284	274	277	251	256	313	281	258
PERSONS AT WORK PART TIME[1]									
All industries:									
Part time for economic reasons	4,783	4,814	4,574	5,086	4,802	4,983	4,887	5,004	4,871
Slack work	2,266	2,503	2,318	2,346	2,277	2,402	2,307	2,476	2,407
Could only find part-time work	2,204	1,980	1,986	2,375	2,106	2,255	2,211	2,127	2,138
Voluntary part time	16,676	16,469	15,907	15,405	15,388	14,931	15,381	15,464	15,193
Nonagricultural industries:									
Part time for economic reasons	4,600	4,605	4,385	4,855	4,554	4,729	4,703	4,747	4,630
Slack work	2,158	2,355	2,176	2,198	2,111	2,240	2,183	2,293	2,218
Could only find part-time work	2,146	1,931	1,949	2,310	2,051	2,172	2,173	2,050	2,096
Voluntary part time	16,205	15,993	15,441	14,975	14,963	14,515	14,924	14,975	14,804

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial dispute.

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Table A-6. Range of unemployment measures based on varying definitions of unemployment and the labor force, seasonally adjusted

(Percent)

Measure	Quarterly averages					Monthly data		
	1989				1990	1990		
	I	II	III	IV	I	Feb.	Mar.	Apr.
U-1 Persons unemployed 15 weeks or longer as a percent of the civilian labor force	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
U-2 Job losers as a percent of the civilian labor force	2.4	2.3	2.4	2.5	2.5	2.5	2.4	2.5
U-3 Unemployed persons 25 years and over as a percent of the civilian labor force for persons 25 years and over	4.0	4.0	4.0	4.1	4.2	4.2	4.1	4.2
U-4 Unemployed full-time jobseekers as a percent of the full-time civilian labor force	4.9	4.9	5.0	5.0	4.9	4.9	4.9	5.1
U-5a Total unemployed as a percent of the labor force, including the resident Armed Forces	5.1	5.2	5.2	5.3	5.2	5.2	5.1	5.3
U-5b Total unemployed as a percent of the civilian labor force	5.2	5.3	5.3	5.3	5.2	5.3	5.2	5.4
U-6 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons as a percent of the civilian labor force less 1/2 of the part-time labor force	7.2	7.3	7.2	7.2	7.2	7.2	7.2	7.4
U-7 Total full-time jobseekers plus 1/2 part-time jobseekers plus 1/2 total on part time for economic reasons plus discouraged workers as a percent of the civilian labor force plus discouraged workers less 1/2 of the part-time labor force	7.9	8.0	7.9	7.9	7.8	N.A.	N.A.	N.A.

N.A. = not available.

Table A-6. Selected unemployment indicators, seasonally adjusted

Category	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
CHARACTERISTIC									
Total, 16 years and over	6,531	6,495	6,770	5.3	5.3	5.3	5.3	5.2	5.4
Men, 16 years and over	3,566	3,505	3,735	5.3	5.3	5.3	5.2	5.1	5.5
Men, 20 years and over	2,922	2,913	3,113	4.6	4.6	4.7	4.6	4.5	4.8
Women, 16 years and over	2,965	2,990	3,034	5.3	5.5	5.2	5.4	5.3	5.4
Women, 20 years and over	2,449	2,456	2,526	4.7	4.8	4.6	4.8	4.7	4.8
Both sexes, 16 to 19 years	1,160	1,126	1,130	14.6	15.2	14.5	14.8	14.4	14.7
Married men, spouse present	1,331	1,334	1,390	3.2	3.0	3.4	3.0	3.2	3.3
Married women, spouse present	1,230	1,114	1,075	4.0	3.9	3.7	3.8	3.6	3.5
Women who maintain families	528	574	517	7.8	8.1	7.5	7.5	8.4	7.5
Full-time workers	5,228	5,185	5,509	5.0	5.0	5.0	4.9	4.9	5.1
Part-time workers	1,308	1,307	1,266	7.2	7.5	7.0	7.4	7.2	7.1
Labor force time lost[2]	—	—	—	6.0	6.0	6.0	5.9	5.9	6.2
INDUSTRY									
Nonagricultural private wage and salary workers	4,947	5,130	5,300	5.3	5.4	5.5	5.5	5.5	5.7
Goods-producing industries	1,767	1,922	2,006	6.0	6.5	6.7	6.6	6.6	6.9
Mining	43	45	35	5.8	4.4	6.8	4.8	5.9	4.6
Construction	623	867	891	9.8	9.8	9.3	8.9	10.0	10.6
Manufacturing	1,101	1,211	1,281	5.0	5.6	5.9	5.9	5.5	5.9
Durable goods	614	694	729	4.7	5.4	5.8	5.5	5.3	5.7
Nondurable goods	487	517	552	5.3	5.9	5.9	6.4	5.9	6.3
Service-producing industries	3,180	3,208	3,293	5.0	4.9	5.0	5.0	5.0	5.1
Transportation and public utilities	260	217	282	3.9	3.4	4.3	4.0	3.4	4.3
Wholesale and retail trade	1,378	1,462	1,484	5.9	6.3	6.2	6.0	6.2	6.2
Finance and service industries	1,542	1,528	1,527	4.6	4.2	4.3	4.4	4.5	4.5
Government workers	485	412	380	2.7	2.6	2.4	2.5	2.3	2.1
Agricultural wage and salary workers	177	183	200	9.8	9.7	9.2	9.3	10.1	11.0

[1] Unemployment as a percent of the civilian labor force.

[2] Aggregate hours lost by the unemployed and persons on part time for economic reasons as a percent of potentially available labor force hours.

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Table A-7. Duration of unemployment

(Numbers in thousands)

Weeks of unemployment	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
DURATION									
Less than 5 weeks	2,778	2,859	2,858	3,113	3,302	3,119	3,159	3,194	3,204
5 to 14 weeks	1,804	2,289	1,953	2,006	2,013	2,012	2,079	2,044	2,175
15 weeks and over	1,647	1,549	1,646	1,391	1,362	1,430	1,369	1,333	1,386
15 to 26 weeks	878	885	915	667	730	777	731	702	697
27 weeks and over	769	664	731	724	632	653	638	631	688
Average (mean) duration, in weeks	13.5	12.5	13.0	12.6	11.5	12.1	11.7	12.0	12.1
Median duration, in weeks	6.3	6.3	5.8	5.4	4.8	5.1	5.4	5.1	5.0
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Less than 5 weeks	44.6	42.7	44.3	47.8	49.5	47.5	47.8	48.6	47.4
5 to 14 weeks	29.0	34.2	30.2	30.8	30.1	30.7	31.5	31.1	32.2
15 weeks and over	26.4	23.1	25.5	21.4	20.4	21.8	20.7	20.3	20.5
15 to 26 weeks	14.1	13.2	14.2	10.2	10.9	11.8	11.1	10.7	10.3
27 weeks and over	12.3	9.9	11.3	11.1	9.5	9.9	9.7	9.6	10.2

Table A-8. Reason for unemployment

(Numbers in thousands)

Reasons	Not seasonally adjusted			Seasonally adjusted					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
NUMBER OF UNEMPLOYED									
Job losers	2,990	3,378	3,213	2,932	3,097	3,183	3,103	3,038	3,147
On layoff	787	1,165	944	833	957	1,033	964	941	999
Other job losers	2,203	2,212	2,269	2,099	2,140	2,150	2,139	2,097	2,148
Job leavers	889	955	1,065	985	1,055	1,016	1,006	1,014	1,179
Reentrants	1,720	1,798	1,625	1,882	1,853	1,730	1,805	1,859	1,780
New entrants	630	565	554	692	686	640	680	644	617
PERCENT DISTRIBUTION									
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Job losers	48.0	50.4	49.8	45.2	46.3	48.5	47.1	46.3	46.8
On layoff	12.6	17.4	14.6	12.8	14.3	15.7	14.6	14.4	14.9
Other job losers	35.4	33.0	35.1	32.3	32.0	32.7	32.4	32.0	31.9
Job leavers	14.3	14.3	16.5	15.2	15.8	15.5	15.3	15.5	17.5
Reentrants	27.6	26.9	25.2	29.0	27.7	26.3	27.4	28.4	26.5
New entrants	10.1	8.4	8.6	10.7	10.3	9.7	10.3	9.8	9.2
UNEMPLOYED AS A PERCENT OF THE CIVILIAN LABOR FORCE									
Job losers	2.4	2.7	2.6	2.4	2.5	2.6	2.5	2.4	2.5
Job leavers	.7	.8	.9	.8	.8	.8	.8	.8	.9
Reentrants	1.4	1.5	1.3	1.5	1.5	1.4	1.4	1.5	1.4
New entrants	.5	.5	.4	.6	.6	.5	.5	.5	.5

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Table A-9. Unemployed persons by sex and age, seasonally adjusted

Sex and age	Number of unemployed persons (in thousands)			Unemployment rates[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
Total, 16 years and over	6,531	6,495	6,770	5.3	5.3	5.3	5.3	5.2	5.4
16 to 24 years	2,367	2,274	2,425	10.6	11.2	10.6	10.7	10.5	11.2
16 to 19 years	1,160	1,126	1,130	14.6	15.2	14.5	14.8	14.4	14.7
16 to 17 years	496	520	519	15.9	18.1	14.8	16.8	16.9	17.4
18 to 19 years	661	615	609	13.7	13.4	14.2	13.0	12.9	13.0
20 to 24 years	1,207	1,148	1,295	8.4	8.9	8.5	8.4	8.3	9.3
25 years and over	4,159	4,237	4,347	4.1	4.1	4.2	4.2	4.1	4.2
25 to 54 years	3,731	3,727	3,864	4.3	4.3	4.3	4.3	4.3	4.4
55 years and over	454	515	505	3.0	3.2	3.4	3.4	3.3	3.3
Men, 16 years and over	3,566	3,505	3,735	5.3	5.3	5.3	5.2	5.1	5.5
16 to 24 years	1,260	1,236	1,343	10.8	11.8	11.2	10.9	10.9	11.8
16 to 19 years	644	592	622	15.6	16.1	15.1	14.9	14.7	15.4
16 to 17 years	284	267	281	17.5	19.6	14.2	16.5	16.9	18.1
18 to 19 years	360	336	341	14.3	13.8	15.6	13.7	13.6	13.8
20 to 24 years	616	644	721	8.2	9.5	8.9	8.6	8.8	9.8
25 years and over	2,298	2,291	2,387	4.1	3.9	4.2	4.1	4.0	4.2
25 to 54 years	2,038	1,997	2,099	4.3	4.0	4.3	4.2	4.2	4.4
55 years and over	262	300	310	3.2	3.8	3.6	3.5	3.4	3.5
Women, 16 years and over	2,965	2,990	3,034	5.3	5.5	5.2	5.4	5.3	5.4
16 to 24 years	1,107	1,038	1,082	10.4	10.4	10.1	10.4	10.0	10.5
16 to 19 years	516	534	508	13.5	14.3	13.7	14.6	14.0	13.9
16 to 17 years	212	253	238	14.1	16.5	15.5	17.3	16.9	16.7
18 to 19 years	301	279	268	12.9	13.0	12.6	12.3	12.0	12.1
20 to 24 years	591	504	574	8.7	8.2	8.0	8.1	7.7	8.7
25 years and over	1,861	1,945	1,961	4.1	4.3	4.1	4.3	4.2	4.2
25 to 54 years	1,693	1,730	1,765	4.4	4.6	4.3	4.5	4.4	4.4
55 years and over	172	216	195	2.7	2.7	3.3	3.3	3.3	2.9

[1] Unemployment as a percent of the civilian labor force.

Table A-10. Employment status of black and other workers

(Numbers in thousands)

Employment status	Not seasonally adjusted			Seasonally adjusted[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
Civilian noninstitutional population	26,926	27,453	27,499	26,926	27,332	27,355	27,406	27,453	27,499
Civilian labor force	17,034	17,498	17,356	17,352	17,648	17,602	17,545	17,727	17,687
Participation rate	63.3	63.7	63.1	64.4	64.6	64.3	64.0	64.6	64.3
Employed	15,406	15,820	15,795	15,676	15,841	15,827	15,927	16,061	16,075
Employment-population ratio[2]	57.2	57.6	57.4	58.2	58.0	57.9	58.1	58.5	58.5
Unemployed	1,628	1,678	1,562	1,676	1,807	1,775	1,618	1,667	1,613
Unemployment rate	9.6	9.6	9.0	9.7	10.2	10.1	9.2	9.4	9.1
Not in labor force	9,892	9,955	10,142	9,574	9,684	9,753	9,860	9,726	9,812

[1] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and seasonally adjusted columns.

[2] Civilian employment as a percent of the civilian noninstitutional population.

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Table A-11. Occupational status of the employed and unemployed, not seasonally adjusted

(Numbers in thousands)

Occupation	Civilian employed		Unemployed		Unemployment rate	
	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990
Total, 16 years and over[1]	116,347	117,359	6,229	6,457	5.1	5.2
Managerial and professional specialty	30,568	30,529	556	563	1.8	1.8
Executive, administrative, and managerial	14,777	14,716	296	326	2.0	2.2
Professional specialty	15,791	15,813	259	237	1.6	1.5
Technical, sales, and administrative support	35,837	36,904	1,347	1,443	3.6	3.8
Technicians and related support	3,575	3,920	86	94	2.3	2.3
Sales occupations	13,820	14,092	600	628	4.2	4.3
Administrative support, including clerical	18,441	18,893	661	721	3.5	3.7
Service occupations	15,204	15,651	1,149	1,054	7.0	6.3
Private household	840	716	66	42	7.3	5.5
Protective service	1,918	1,930	80	55	4.0	2.8
Service, except private household and protective	12,446	13,005	1,003	958	7.5	6.9
Precision production, craft, and repair	13,560	13,646	797	827	5.6	5.7
Mechanics and repairers	4,555	4,388	205	175	4.3	3.8
Construction trades	4,905	5,173	439	449	8.2	8.0
Other precision production, craft, and repair	4,099	4,086	153	203	3.6	4.7
Operators, fabricators, and laborers	17,886	17,411	1,503	1,694	7.8	8.9
Machine operators, assemblers, and inspectors	8,257	7,795	650	675	7.3	8.0
Transportation and material moving occupations	4,770	4,772	302	317	5.9	6.2
Handlers, equipment cleaners, helpers, and laborers	4,859	4,845	552	702	10.2	12.7
Construction laborers	755	740	157	181	17.2	19.7
Other handlers, equipment cleaners, helpers, and laborers	4,104	4,104	394	522	8.8	11.3
Farming, forestry, and fishing	3,292	3,217	221	231	6.3	6.7

[1] Persons with no previous work experience and those whose last job was in the Armed Forces are included in the unemployed total.

Table A-12. Employment status of male Vietnam-era veterans and nonveterans by age, not seasonally adjusted

(Numbers in thousands)

Veteran status and age	Civilian noninstitutional population		Civilian labor force							
			Total		Employed		Unemployed			
							Number		Percent of labor force	
	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990	Apr. 1989	Apr. 1990
VIETNAM-ERA VETERANS										
Total, 35 years and over	7,389	7,607	6,730	6,916	6,491	6,659	239	257	3.6	3.7
35 to 49 years	6,435	6,525	6,099	6,151	5,873	5,908	226	242	3.7	3.9
35 to 39 years	1,840	1,470	1,731	1,378	1,639	1,302	92	76	5.3	5.5
40 to 44 years	3,221	3,335	3,057	3,182	2,961	3,067	96	116	3.1	3.6
45 to 49 years	1,374	1,720	1,311	1,591	1,273	1,540	38	51	2.9	3.2
50 years and over	954	1,082	631	766	618	751	14	15	2.2	1.9
NONVETERANS										
Total, 35 to 49 years	16,022	17,045	14,965	15,936	14,355	15,321	610	615	4.1	3.9
35 to 39 years	7,302	7,818	6,924	7,440	6,624	7,173	300	267	4.3	3.6
40 to 44 years	4,654	5,020	4,336	4,670	4,177	4,490	159	180	3.7	3.8
45 to 49 years	4,066	4,207	3,705	3,825	3,554	3,657	150	166	4.0	4.4

NOTE: Male Vietnam-era veterans are men who served in the Armed Forces between August 5, 1964 and May 7, 1975. Nonveterans are men who have never served in the Armed Forces; published data are limited to those 35 to 49 years of age, the group that most closely corresponds to the bulk of the Vietnam-era veteran population. Data for 30-to 34-year-old veterans are no longer shown in this table because the group is rapidly disappearing (into the 35-39 age category) and the numbers remaining for some labor force categories are not large enough to warrant their continued publication.

HOUSEHOLD DATA

Table A-13. Employment status of the civilian population for eleven large States

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[2]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
California									
Civilian noninstitutional population	21,358	21,794	21,834	21,358	21,680	21,718	21,756	21,794	21,834
Civilian labor force	14,238	14,545	14,600	14,312	14,627	14,491	14,496	14,613	14,677
Employed	13,509	13,779	13,831	13,556	13,854	13,734	13,784	13,847	13,881
Unemployed	730	766	769	756	773	757	712	766	796
Unemployment rate	5.1	5.3	5.3	5.3	5.3	5.2	4.9	5.2	5.4
Florida									
Civilian noninstitutional population	9,842	10,052	10,071	9,842	9,997	10,015	10,034	10,052	10,071
Civilian labor force	6,153	6,345	6,297	6,196	6,245	6,289	6,369	6,351	6,336
Employed	5,837	6,029	5,950	5,861	5,883	5,940	5,989	6,021	5,972
Unemployed	317	316	347	335	362	349	380	330	364
Unemployment rate	5.1	5.0	5.5	5.4	5.8	5.5	6.0	5.2	5.7
Illinois									
Civilian noninstitutional population	8,824	8,859	8,863	8,824	8,851	8,854	8,857	8,859	8,863
Civilian labor force	5,970	5,948	6,039	6,024	6,039	6,064	6,029	6,001	6,091
Employed	5,632	5,595	5,662	5,693	5,661	5,673	5,674	5,671	5,722
Unemployed	338	354	376	331	378	391	355	330	369
Unemployment rate	5.7	5.9	6.2	5.5	6.3	6.4	5.9	5.5	6.1
Massachusetts									
Civilian noninstitutional population	4,617	4,618	4,619	4,617	4,619	4,619	4,619	4,618	4,619
Civilian labor force	3,196	3,166	3,160	3,202	3,172	3,152	3,203	3,178	3,161
Employed	3,078	2,978	2,987	3,083	3,027	3,011	3,034	3,006	2,988
Unemployed	119	188	173	119	145	141	169	172	173
Unemployment rate	3.7	5.9	5.5	3.7	4.6	4.5	5.3	5.4	5.5
Michigan									
Civilian noninstitutional population	6,981	6,994	6,995	6,981	6,992	6,993	6,993	6,994	6,995
Civilian labor force	4,473	4,489	4,447	4,534	4,645	4,645	4,605	4,553	4,511
Employed	4,197	4,148	4,136	4,241	4,310	4,254	4,250	4,226	4,180
Unemployed	276	340	311	293	335	391	355	327	331
Unemployment rate	6.2	7.6	7.0	6.5	7.2	8.4	7.7	7.2	7.3
New Jersey									
Civilian noninstitutional population	6,033	6,028	6,028	6,033	6,031	6,030	6,029	6,028	6,028
Civilian labor force	3,942	4,048	3,976	3,967	4,006	3,994	4,029	4,034	4,002
Employed	3,803	3,849	3,800	3,807	3,857	3,810	3,848	3,844	3,805
Unemployed	139	199	177	160	149	184	181	190	197
Unemployment rate	3.5	4.9	4.4	4.0	3.7	4.6	4.5	4.7	4.9
New York									
Civilian noninstitutional population	13,805	13,799	13,799	13,805	13,804	13,803	13,801	13,799	13,799
Civilian labor force	8,653	8,599	8,581	8,783	8,762	8,709	8,730	8,660	8,709
Employed	8,169	8,141	8,170	8,289	8,278	8,300	8,294	8,223	8,286
Unemployed	483	458	411	494	484	409	436	437	423
Unemployment rate	5.6	5.3	4.8	5.6	5.5	4.7	5.0	5.0	4.9
North Carolina									
Civilian noninstitutional population	4,925	4,980	4,985	4,925	4,986	4,971	4,975	4,980	4,985
Civilian labor force	3,383	3,365	3,367	3,428	3,396	3,361	3,395	3,399	3,410
Employed	3,245	3,245	3,247	3,280	3,289	3,237	3,274	3,283	3,281
Unemployed	138	121	120	148	107	124	121	116	129
Unemployment rate	4.1	3.6	3.6	4.3	3.2	3.7	3.6	3.4	3.8
Ohio									
Civilian noninstitutional population	8,256	8,276	8,278	8,256	8,272	8,274	8,275	8,276	8,278
Civilian labor force	5,333	5,353	5,373	5,374	5,442	5,426	5,372	5,402	5,417
Employed	5,066	5,035	5,071	5,090	5,110	5,060	5,061	5,107	5,098
Unemployed	267	318	302	284	332	366	311	295	319
Unemployment rate	5.0	5.9	5.6	5.3	6.1	6.7	5.8	5.5	5.9

See footnotes at end of table.

Table A-13. Employment status of the civilian population for eleven large States—Continued

(Numbers in thousands)

State and employment status	Not seasonally adjusted[1]			Seasonally adjusted[1]					
	Apr. 1989	Mar. 1990	Apr. 1990	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990	Apr. 1990
Pennsylvania									
Civilian noninstitutional population[2]	9,362	9,380	9,382	9,362	9,377	9,378	9,379	9,380	9,382
Civilian labor force	5,813	5,915	5,878	5,883	5,880	5,875	5,966	6,004	5,945
Employed	5,578	5,599	5,562	5,623	5,575	5,568	5,623	5,694	5,604
Unemployed	235	316	315	260	305	307	343	310	341
Unemployment rate	4.0	5.3	5.4	4.4	5.2	5.2	5.7	5.2	5.7
Texas									
Civilian noninstitutional population[2]	12,183	12,323	12,337	12,183	12,288	12,300	12,312	12,323	12,337
Civilian labor force	8,360	8,346	8,386	8,467	8,423	8,440	8,494	8,447	8,495
Employed	7,779	7,874	7,887	7,845	7,866	7,999	7,949	7,977	7,955
Unemployed	581	473	499	622	557	441	545	470	540
Unemployment rate	7.0	5.7	6.0	7.3	6.6	5.2	6.4	5.6	6.4

[1] These are the official Bureau of Labor Statistics' estimates used in the administration of Federal fund allocation programs.

[2] The population figures are not adjusted for seasonal variation; therefore, identical numbers appear in the unadjusted and the seasonally adjusted columns.

ESTABLISHMENT DATA

ESTABLISHMENT DATA

Table B-1. Employees on nonagricultural payrolls by industry

(In thousands)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1989	Feb. 1990	Mar. 1990p/	Apr. 1990p/	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990p/	Apr. 1990p/
Total	107,944	108,895	109,559	110,332	108,101	109,570	109,931	110,304	110,407	110,471
Total private	89,975	90,589	91,072	91,747	90,475	91,699	91,979	92,302	92,297	92,233
Goods-producing industries	25,412	25,000	25,054	25,244	25,671	25,552	25,518	25,686	25,604	25,489
Mining	711	733	736	747	720	739	745	749	749	755
Oil and gas extraction	394.0	416.6	415.0	418.8	400	416	417	422	421	425
Construction	5,121	4,942	5,004	5,179	5,279	5,304	5,418	5,485	5,433	5,334
General building contractors	1,351.7	1,319.4	1,320.5	1,340.7	1,377	1,388	1,425	1,436	1,415	1,389
Manufacturing	19,580	19,325	19,314	19,318	19,672	19,489	19,355	19,452	19,422	19,400
Production workers	13,362	13,113	13,106	13,135	13,430	13,262	13,123	13,217	13,192	13,198
Durable goods	11,573	11,343	11,360	11,337	11,600	11,409	11,287	11,398	11,383	11,353
Production workers	7,727	7,523	7,527	7,542	7,744	7,579	7,456	7,564	7,559	7,551
Lumber and wood products	757.8	741.9	745.1	746.8	772	765	770	765	765	760
Furniture and fixtures	536.0	522.9	522.8	522.7	537	523	522	522	523	522
Stone, clay, and glass products	603.3	578.9	584.5	592.2	606	600	601	602	598	594
Primary metal industries	788.7	767.4	766.8	765.4	788	771	764	767	765	765
Blast furnaces and basic steel products	275.2	268.2	267.4	266.7	275	270	270	269	267	268
Fabricated metal products	1,449.5	1,414.6	1,416.0	1,420.1	1,454	1,426	1,407	1,419	1,420	1,424
Machinery, except electrical	2,148.4	2,144.3	2,137.4	2,124.9	2,144	2,145	2,143	2,140	2,133	2,121
Electrical and electronic equipment	2,047.8	1,987.0	1,981.9	1,975.6	2,058	1,992	1,989	1,991	1,990	1,984
Transportation equipment	2,075.1	2,025.0	2,021.7	2,024.7	2,075	2,022	1,920	2,021	2,022	2,017
Motor vehicles and equipment	876.7	824.5	824.2	828.2	875	825	726	825	824	821
Instruments and related products	775.7	774.1	775.8	774.4	777	774	774	776	775	776
Miscellaneous manufacturing	390.2	389.2	389.6	389.8	391	391	395	395	392	390
Nondurable goods	8,007	7,982	7,974	7,981	8,072	8,080	8,068	8,054	8,039	8,047
Production workers	5,635	5,592	5,579	5,591	5,686	5,683	5,677	5,653	5,633	5,647
Food and kindred products	1,600.4	1,618.3	1,612.4	1,612.2	1,657	1,676	1,674	1,674	1,669	1,669
Tobacco manufactures	51.4	51.5	49.1	45.8	54	51	51	51	50	48
Textile mill products	727.7	712.5	709.4	708.7	728	719	718	716	711	710
Apparel and other textile products	1,100.3	1,063.9	1,055.7	1,062.8	1,098	1,081	1,075	1,065	1,055	1,061
Paper and allied products	692.1	694.4	693.8	693.9	696	697	694	699	697	698
Printing and publishing	1,602.2	1,624.9	1,627.2	1,627.3	1,601	1,621	1,624	1,625	1,626	1,626
Chemicals and allied products	1,086.4	1,100.4	1,102.7	1,102.2	1,090	1,103	1,104	1,106	1,106	1,106
Petroleum and coal products	160.6	160.4	162.2	164.9	162	163	165	165	166	166
Rubber and misc. plastics products	844.5	820.9	826.5	828.9	843	832	824	821	825	828
Leather and leather products	141.8	135.2	134.7	134.6	145	137	134	136	136	135
Service-producing industries	82,532	83,895	84,505	85,088	82,430	84,038	84,413	84,618	84,803	84,982
Transportation and public utilities	5,649	5,790	5,806	5,835	5,682	5,834	5,850	5,865	5,864	5,866
Transportation	3,445	3,587	3,605	3,627	3,467	3,613	3,633	3,649	3,652	3,649
Communication and public utilities	2,206	2,203	2,201	2,208	2,215	2,221	2,219	2,216	2,212	2,217
Wholesale trade	6,186	6,276	6,302	6,327	6,206	6,311	6,332	6,332	6,343	6,345
Durable goods	3,669	3,736	3,747	3,757	3,676	3,746	3,754	3,759	3,762	3,765
Nondurable goods	2,517	2,540	2,555	2,570	2,530	2,565	2,571	2,573	2,581	2,580
Retail trade	19,275	19,279	19,363	19,584	19,489	19,718	19,822	19,794	19,778	19,802
General merchandise stores	2,404.9	2,388.8	2,363.0	2,364.2	2,492	2,470	2,491	2,460	2,451	2,447
Food stores	3,197.0	3,227.5	3,221.9	3,235.5	3,253	3,241	3,261	3,261	3,262	3,276
Automotive dealers and service stations	2,148.4	2,141.3	2,149.3	2,159.3	2,159	2,163	2,179	2,172	2,171	2,168
Eating and drinking places	6,316.0	6,195.6	6,311.5	6,474.8	6,335	6,432	6,457	6,467	6,480	6,494
Finance, insurance, and real estate	6,749	6,851	6,876	6,896	6,776	6,885	6,894	6,916	6,926	6,926
Finance	3,502	3,556	3,558	3,554	3,512	3,560	3,555	3,366	3,365	3,367
Insurance	2,117	2,153	2,160	2,166	2,119	2,144	2,156	2,155	2,162	2,168
Real estate	1,330	1,342	1,358	1,376	1,345	1,381	1,391	1,395	1,399	1,391
Services	26,784	27,406	27,671	27,861	26,651	27,419	27,552	27,709	27,782	27,805
Business services	5,719.5	5,798.6	5,839.8	5,869.3	5,760	5,852	5,885	5,899	5,904	5,891
Health services	7,512.8	7,964.6	8,026.3	8,064.0	7,528	7,884	7,934	7,981	8,034	8,080
Government	17,969	18,295	18,487	18,585	17,626	17,871	17,956	18,002	18,110	18,238
Federal	2,982	2,991	3,082	3,161	2,982	2,974	2,993	3,006	3,085	3,167
State	4,222	4,289	4,316	4,324	4,111	4,156	4,178	4,197	4,203	4,210
Local	10,765	11,015	11,089	11,100	10,533	10,741	10,783	10,799	10,819	10,861

p = preliminary.

Note on temporary census workers

The hiring of temporary workers for the 1990 decennial census affects current levels of Federal government employment and higher aggregates. Estimates of these workers are 22,000, 27,000, 117,000, and 195,000 in January, February, March, and April 1990, respectively. Preliminary estimates in this table that include these workers may be subject to larger than normal revisions.

ESTABLISHMENT DATA

Table B-2. Average weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1989	Feb. 1990	Mar. 1990p/	Apr. 1990p/	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990p/	Apr 1990p/
Total private	34.8	34.3	34.6	34.5	34.9	34.5	34.5	34.6	34.6	34.6
Mining	42.8	43.2	42.9	43.2	(2)	(2)	(2)	(2)	(2)	(2)
Construction	37.9	37.2	37.9	37.4	(2)	(2)	(2)	(2)	(2)	(2)
Manufacturing	41.0	40.4	40.7	39.7	41.5	40.6	40.7	40.7	40.8	40.6
Overtime hours	3.8	3.4	3.6	2.9	3.9	3.6	3.7	3.6	3.7	3.5
Durable goods	41.7	41.0	41.4	40.3	41.9	41.2	41.3	41.5	41.4	41.2
Overtime hours	3.9	3.5	3.7	2.8	4.1	3.6	3.7	3.6	3.7	3.5
Lumber and wood products	40.5	39.3	40.1	40.2	40.5	40.1	40.5	39.8	40.3	40.3
Furniture and fixtures	39.5	38.9	39.0	38.3	39.9	39.2	39.8	39.5	39.2	39.2
Stone, clay, and glass products	42.6	41.0	41.6	42.1	42.5	41.5	42.2	42.1	41.9	42.1
Primary metal industries	43.2	42.3	42.6	41.6	43.5	42.5	42.5	42.3	42.5	41.7
Blast furnaces and basic steel products	45.6	42.7	42.9	42.9	43.5	42.8	43.2	42.8	42.9	42.9
Fabricated metal products	41.7	41.1	41.6	39.9	41.9	41.2	41.1	41.5	41.7	41.1
Machinery, except electrical	42.5	42.1	42.1	40.6	42.7	42.0	42.1	42.2	42.0	41.7
Electrical and electronic equipment	40.7	40.8	40.9	39.7	41.0	40.5	40.8	41.1	41.1	40.9
Transportation equipment	43.0	41.5	42.4	40.6	42.8	41.9	41.4	41.5	42.1	42.0
Motor vehicles and equipment	43.7	41.2	42.7	40.8	43.3	42.2	40.8	41.2	42.2	41.4
Instruments and related products	41.5	41.0	41.2	40.5	41.5	40.9	41.0	41.0	41.1	41.4
Miscellaneous manufacturing	39.6	39.2	39.4	38.1	39.8	39.3	39.4	39.5	39.4	39.1
Nondurable goods	40.1	39.6	39.7	39.0	40.4	39.9	40.0	39.9	39.9	39.7
Overtime hours	3.9	3.5	3.4	2.9	3.8	3.6	3.6	3.5	3.5	3.4
Food and kindred products	40.0	39.8	40.0	39.6	40.7	40.6	40.5	40.5	40.6	40.4
Tobacco manufactures	38.1	37.7	38.8	37.9	(2)	(2)	(2)	(2)	(2)	(2)
Textile mill products	41.2	39.9	39.8	38.6	41.7	40.2	40.5	40.2	40.0	39.7
Apparel and other textile products	37.1	36.4	36.2	34.8	37.6	36.3	36.7	36.6	36.2	36.0
Paper and allied products	43.1	42.7	42.9	42.3	43.4	43.1	43.3	43.0	43.2	43.1
Printing and publishing	37.8	37.6	37.9	37.1	37.9	37.6	37.8	37.8	37.8	37.5
Chemicals and allied products	42.5	42.2	42.4	42.6	42.6	42.7	42.7	42.3	42.4	42.6
Petroleum and coal products	44.3	43.9	44.4	44.9	(2)	(2)	(2)	(2)	(2)	(2)
Rubber and misc. plastics products	41.5	41.0	41.2	40.0	41.6	40.8	40.9	41.1	41.2	40.9
Leather and leather products	37.8	37.3	37.3	36.1	38.3	37.2	37.4	38.0	37.8	37.1
Transportation and public utilities	39.8	39.0	39.2	39.5	40.1	39.5	39.1	39.3	39.4	39.7
Wholesale trade	38.2	37.8	37.9	38.1	38.3	38.0	38.0	38.1	38.1	38.2
Retail trade	28.9	28.3	28.5	29.0	29.1	28.7	28.8	28.9	28.9	29.0
Finance, insurance, and real estate	36.5	35.8	35.6	36.2	(2)	(2)	(2)	(2)	(2)	(2)
Services	32.8	32.5	32.5	32.7	32.8	32.6	32.5	32.6	32.7	32.7

1/ Data relate to production workers in mining and manufacturing; construction workers in construction; and nonsupervisory workers in transportation and public utilities; wholesale and retail trade; finance; insurance, and real estate; and services. These groups account for approximately four-fifths of the total employees on private nonagricultural payrolls.

2/ These series are not published seasonally adjusted since the seasonal component is small relative to the trend-cycle and/or irregular components and consequently cannot be separated with sufficent precision.

p = preliminary.

ESTABLISHMENT DATA

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Table B-3. Average hourly and weekly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

Industry	Average hourly earnings				Average weekly earnings			
	Apr. 1989	Feb. 1990	Mar. 1990p/	Apr. 1990p/	Apr. 1989	Feb. 1990	Mar. 1990p/	Apr. 1990p/
Total private	$9.62	$9.91	$9.93	$9.97	$334.78	$339.91	$341.59	$343.97
Seasonally adjusted	9.61	9.88	9.92	9.95	335.39	341.85	343.23	344.27
Mining	13.19	13.30	13.39	13.48	564.53	574.56	574.43	582.34
Construction	13.38	13.42	13.47	13.38	504.87	499.22	518.51	508.41
Manufacturing	10.41	10.66	10.74	10.77	426.81	430.66	437.12	427.57
Durable goods	10.93	11.17	11.24	11.25	455.78	457.97	465.34	455.36
Lumber and wood products	8.76	8.96	9.05	9.08	354.78	352.13	362.91	365.02
Furniture and fixtures	8.12	8.39	8.41	8.42	319.12	326.37	327.99	322.49
Stone, clay, and glass products	10.71	10.85	10.94	11.16	468.25	444.85	455.10	469.84
Primary metal industries	12.26	12.60	12.66	13.05	529.63	532.96	539.32	542.05
Blast furnaces and basic steel products	14.06	14.59	14.54	15.37	615.02	622.99	625.77	659.37
Fabricated metal products	10.48	10.66	10.74	10.69	457.02	458.13	466.78	456.53
Machinery, except electrical	11.26	11.53	11.57	11.53	478.55	485.41	487.10	468.12
Electrical and electronic equipment	10.31	10.54	10.58	10.58	419.62	430.05	432.72	420.03
Transportation equipment	13.60	13.90	14.04	13.94	584.80	576.85	595.30	565.96
Motor vehicles and equipment	14.20	14.33	14.61	14.45	620.54	590.49	623.85	589.56
Instruments and related products	10.17	10.55	10.56	10.57	420.02	432.55	435.07	428.09
Miscellaneous manufacturing	8.21	8.58	8.59	8.59	325.12	336.34	338.45	327.28
Nondurable goods	9.65	9.96	10.02	10.10	386.97	394.42	397.79	395.90
Food and kindred products	9.32	9.48	9.57	9.61	372.80	377.30	382.80	380.56
Tobacco manufactures	15.87	15.70	16.47	17.30	606.65	591.89	639.04	655.67
Textile mill products	7.60	7.92	7.94	7.94	313.12	316.01	316.01	306.48
Apparel and other textile products	6.32	6.45	6.54	6.58	234.47	234.78	236.75	228.98
Paper and allied products	11.83	12.12	12.12	12.26	509.87	517.52	519.95	518.60
Printing and publishing	10.75	11.09	11.13	11.10	405.59	416.98	421.83	411.81
Chemicals and allied products	12.92	13.24	13.29	13.44	549.10	558.73	563.50	572.54
Petroleum and coal products	15.50	15.92	16.06	16.34	686.65	698.89	715.06	733.67
Rubber and misc. plastics products	9.35	9.59	9.63	9.59	388.05	395.19	396.76	385.60
Leather and leather products	6.55	6.82	6.84	6.98	247.59	254.39	255.13	251.98
Transportation and public utilities	12.51	12.85	12.81	12.86	497.90	501.15	502.15	507.97
Wholesale trade	10.36	10.66	10.65	10.76	395.75	402.95	403.64	409.96
Retail trade	6.52	6.73	6.75	6.77	188.43	190.46	192.38	196.33
Finance, insurance, and real estate	9.59	9.90	9.87	10.00	348.12	354.42	351.57	362.00
Services	9.34	9.75	9.75	9.81	306.35	316.88	316.88	320.79

1/ See footnote 1, table B-2.

p = preliminary.

Table B-4. Average hourly earnings of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry, seasonally adjusted

Industry	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990p/	Apr. 1990p/	Percent change from: Mar. 1990-Apr. 1990
Total private2/:							
Current dollars	$9.61	$9.83	$9.85	$9.88	$9.92	$9.95	0.3
Constant (1977) dollars3/	4.80	4.80	4.74	4.74	4.75	N.A.	(4)
Construction	13.33	13.60	13.54	13.43	13.47	$13.39	-.6
Manufacturing	10.40	10.61	10.55	10.65	10.72	10.76	.4
Excluding overtime5/	9.92	10.15	10.10	10.21	10.27	10.37	1.0
Transportation and public utilities	12.52	12.71	12.79	12.82	12.85	12.86	.1
Wholesale trade	10.36	10.59	10.57	10.62	10.65	10.75	.9
Retail trade	6.51	6.65	6.69	6.71	6.74	6.75	.1
Finance, insurance, and real estate	9.56	9.79	9.75	9.78	9.82	9.92	1.0
Services	9.32	9.62	9.62	9.65	9.70	9.78	.8

1/ See footnote 1, table B-2.

2/ Includes mining, not shown separately, because its seasonal component is too small to be separated out with sufficient precision.

3/ The Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W) is used to deflate this series.

4/ Change was 0.2 percent from February 1990 to March 1990, the latest month available.

5/ Derived by assuming that overtime hours are paid at the rate of time and one-half.

N.A. = not available.

p/ = preliminary.

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Table B-5. Indexes of aggregate weekly hours of production or nonsupervisory workers1/ on private nonagricultural payrolls by industry

(1977=100)

Industry	Not seasonally adjusted				Seasonally adjusted					
	Apr. 1989	Feb. 1990	Mar. 1990p/	Apr. 1990p/	Apr. 1989	Dec. 1989	Jan. 1990	Feb. 1990	Mar. 1990p/	Apr. 1990p/
Total private	127.4	126.2	127.4	128.7	128.7	128.8	129.5	130.2	130.5	130.2
Goods-producing industries	101.8	98.9	99.1	98.1	103.5	101.1	102.2	102.9	102.5	100.9
Mining	81.6	84.7	84.7	86.6	83.4	85.3	87.1	87.8	87.5	88.2
Construction	136.1	127.0	131.1	135.2	141.0	139.5	149.5	150.6	146.7	139.9
Manufacturing	96.1	93.0	93.6	91.5	97.2	94.5	93.7	94.5	94.4	93.9
Durable goods	94.7	90.6	91.5	89.2	95.2	91.6	90.5	91.7	91.9	91.1
Lumber and wood products	105.6	97.9	100.2	100.7	105.9	103.2	105.1	102.5	103.7	102.9
Furniture and fixtures	112.6	108.5	108.5	106.7	114.6	109.1	110.5	109.7	108.9	109.4
Stone, clay, and glass products	90.9	85.1	85.4	87.7	91.0	87.7	89.6	89.4	88.4	88.0
Primary metal industries	68.6	64.9	65.4	63.7	68.6	65.6	64.8	64.9	65.0	63.8
Blast furnaces and basic steel products	53.0	50.2	50.4	50.1	52.4	51.1	51.3	50.6	50.2	50.2
Fabricated metal products	91.4	87.5	88.3	88.1	92.2	88.5	86.7	88.0	88.9	88.1
Machinery, except electrical	95.8	93.0	92.6	89.1	95.9	92.4	92.7	92.9	91.9	91.1
Electrical and electronic equipment	98.4	95.6	95.9	93.1	99.7	95.0	95.7	96.4	96.9	96.4
Transportation equipment	102.0	95.9	96.1	92.4	101.2	95.0	85.7	93.5	95.3	94.8
Motor vehicles and equipment	92.5	80.5	83.4	80.2	91.1	82.4	67.0	80.5	82.5	80.5
Instruments and related products	115.7	114.8	115.1	113.6	116.4	114.4	115.2	115.0	115.0	116.4
Miscellaneous manufacturing	86.4	85.5	85.8	87.8	87.1	86.3	87.7	87.6	86.5	84.9
Nondurable goods	98.5	96.4	96.6	94.9	100.1	98.7	98.8	98.5	97.9	97.7
Food and kindred products	97.6	98.7	98.7	97.8	103.8	105.0	105.1	104.7	104.7	104.4
Tobacco manufactures	66.1	68.5	64.9	57.4	73.0	66.2	69.0	68.9	67.1	64.4
Textile mill products	81.2	76.4	75.9	75.6	82.1	78.1	78.3	77.2	76.3	75.8
Apparel and other textile products	85.9	81.1	80.1	77.4	86.8	82.4	82.5	81.5	79.6	79.9
Paper and allied products	100.9	100.7	100.8	99.8	102.4	102.1	102.5	102.0	102.1	102.4
Printing and publishing	138.5	139.4	140.8	138.0	138.2	138.8	140.0	140.5	140.2	138.8
Chemicals and allied products	100.6	100.9	101.2	101.8	100.9	102.8	102.6	101.5	101.4	102.1
Petroleum and coal products	82.5	81.5	83.7	86.6	82.9	85.6	83.9	85.5	87.6	86.8
Rubber and misc. plastics products	119.8	114.0	115.6	112.6	119.9	115.3	114.5	114.2	115.2	114.9
Leather and leather products	55.1	51.8	51.6	49.7	56.0	52.1	52.4	53.3	53.0	51.5
Service-producing industries	141.5	141.8	143.1	145.7	142.6	144.1	144.6	145.3	145.8	146.4
Transportation and public utilities	117.0	117.8	118.8	120.1	118.6	119.8	119.4	120.5	120.8	121.6
Wholesale trade	126.2	126.4	127.3	128.7	127.2	128.1	128.7	128.9	129.1	129.5
Retail trade	125.1	122.7	124.0	127.9	127.7	127.6	128.6	128.8	128.7	129.4
Finance, insurance, and real estate	142.9	143.8	145.8	146.9	143.8	144.1	144.5	145.2	145.4	147.2
Services	169.2	171.4	173.4	175.5	168.9	172.4	172.7	174.0	175.2	175.3

1/ See footnote 1, table B-2.

p = preliminary.

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Table B-6. Diffusion indexes of employment change, seasonally adjusted

(Percent)

Time span	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.
	Private nonagricultural payrolls, 349 industries1/											
Over 1-month span:												
1988	60.7	63.5	63.8	62.8	61.3	67.2	63.6	58.0	55.4	63.9	68.2	64.6
1989	68.3	60.5	61.0	58.2	55.6	59.7	59.6	57.4	47.9	55.3	60.9	51.9
1990	58.5	57.9	p/51.6	p/49.9								
Over 3-month span:												
1988	64.8	65.6	69.5	70.2	71.1	71.9	71.2	64.2	65.3	70.1	73.4	74.6
1989	71.6	70.1	64.5	61.9	61.6	60.7	61.6	55.4	54.6	55.7	57.2	60.2
1990	58.2	p/58.6	p/55.2									
Over 6-month span:												
1988	69.9	70.2	71.5	73.9	73.9	69.1	70.2	74.6	73.5	73.9	74.5	75.8
1989	75.1	69.5	68.2	66.8	63.0	57.9	57.7	60.2	55.4	58.5	58.3	p/60.5
1990	p/56.3											
Over 12-month span:												
1988	76.2	76.1	74.8	74.6	75.8	74.9	78.1	75.5	75.5	74.8	74.9	74.1
1989	73.2	73.6	69.6	67.6	66.6	62.6	63.6	63.2	p/60.7	p/58.0		
1990												
	Manufacturing payrolls, 141 industries1/											
Over 1-month span:												
1988	58.5	56.0	55.0	59.9	58.5	61.7	59.6	51.1	49.3	a2.8	64.9	58.5
1989	62.4	53.5	55.2	49.6	46.8	48.6	49.6	45.4	34.8	52.1	48.2	44.7
1990	45.4	49.3	p/44.0	p/46.5								
Over 3-month span:												
1988	63.1	61.0	62.4	66.9	67.4	67.0	64.5	58.2	62.1	66.7	71.3	70.9
1989	67.4	65.8	55.7	51.8	49.5	48.6	47.9	54.0	41.8	41.5	46.5	41.1
1990	42.2	p/41.1	p/44.5									
Over 6-month span:												
1988	66.5	66.5	67.7	69.5	66.7	64.2	66.0	70.9	68.8	69.9	71.6	74.1
1989	69.5	58.5	55.7	52.8	48.9	39.0	40.1	41.8	34.4	37.9	40.8	p/44.0
1990	p/37.9											
Over 12-month span:												
1988	73.8	70.2	70.9	71.6	72.0	69.9	70.9	69.1	71.6	70.2	69.9	67.0
1989	63.1	63.8	57.1	55.5	49.6	42.9	43.3	42.2	p/57.9	p/46.9		
1990												

1/ Based on seasonally adjusted data for 1-, 3-, and 6-month spans and unadjusted data for the 12-month span. Data are centered within the span.

p=preliminary.

NOTE: Figures are the percent of industries with employment increasing plus one- half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment.

Representative HAMILTON. Thank you very much.

What is causing the slow down in the service sector?

Mrs. NORWOOD. I can't tell you exactly what's causing it. You need to look at the various industries that make up the service-producing sector. If we set aside government, which has been affected by some special circumstances, and look at the private service-producing sector, what you see clearly is that retail sales have been fairly weak, the retail trade industry in general has had many months that have been quite lackluster, and so you have a kind of flatness in employment growth there.

Representative HAMILTON. Does that mean, do you think, that the growth that we've had in that segment of the economy is now coming to an end?

Mrs. NORWOOD. I don't think we can tell from this month's and last month's data exactly what's going to happen or where we will go. And I believe that we're going to need a couple of months' additional data to be able to determine that because of the strong surges in employment that we had in the winter months.

Retail trade, however, has been somewhat weak for some time. In contrast, if you look at the services industry itself, which has been pretty much pushing employment growth for a long time, it's quite clear that increases in the number of jobs in business services has slowed considerably.

Representative HAMILTON. Is there a connection or a tie between the service industries and the status of the manufacturing industries?

Mrs. NORWOOD. Clearly, factory workers use services so you have that kind of a tie-in. The second area is that many of the business services have provided things like accounting, legal services, computer services, and so on, to the factories, the manufacturing companies. And, as I indicated, that has slowed considerably. Where we're seeing the growth in the services industry now is on the health side. As you know, the population is getting older and people are living longer, and there is a greater demand for medical services that has spurred employment growth in the health sector.

Representative HAMILTON. I have your conclusion here, in which you say that what seems clear is that the goods-producing sector saw reduced employment during the past year, and now the job increases are slowing in the service sector. Does that inevitably follow? That is, if you have a slowdown in the goods-producing sector for that long a period of time, is it likely, or probable, or predictable that you will see a slowdown in the service-sector industries?

Mrs. NORWOOD. We haven't really had this kind of situation before. We're in a very long expansion period. Generally, after a recession, and we had a very steep one in the early 1980's, job growth is very vigorous in the beginning and then it begins to slow down. We're clearly seeing that.

We have three out of every four people now working in one of the service-producing industries, and therefore fewer people are affected than in the past by the slowdown or reductions in manufacturing.

We need to be very careful, I think, not to confuse employment growth with output growth in manufacturing. Some of the recent

job declines in manufacturing stem from increased efficiencies in production.

Representative HAMILTON. Yes, but we've had a long decline in manufacturing employment, though, haven't we?

Mrs. NORWOOD. Yes; yes, indeed. And it's large, quite large.

Representative HAMILTON. 300,000 jobs.

Mrs. NORWOOD. Well, it's nearly that, it's about 260,000 over the year. That's large, there's no doubt about that.

Representative HAMILTON. And nothing to indicate that it may be turning around?

Mrs. NORWOOD. Well, certainly not in these data on employment, but as I indicated, we have to be careful not to equate employment growth with output growth.

Representative HAMILTON. Now, in manufacturing there has been a two-tenths decline in average weekly hours, as well as a similar decline in overtime hours in April. You've testified in the past that that kind of a decline often precedes a decline in employment.

Does the two-tenths of an hour decline in average weekly hours and overtime hours suggest that we are going to see a further decline in employment in manufacturing?

Mrs. NORWOOD. Factory hours have been considered a leading indicator. In this case, however, I think we'd need more months to tell that. Because if you look at the data over recent months, you'll see that last month, for example, there was an uptick in that number, that is, it went up a tenth, now it's down two-tenths. So over a period of some months, factory hours are really holding fairly steady.

And I would not, therefore, give a great deal of attention to the factory hours figure for April.

Representative HAMILTON. You reported growth of payroll employment for March at 26,000 and then you revised it upward to 103,000.

Mrs. NORWOOD. Yes.

Representative HAMILTON. Why? Why did that occur and what industries were responsible?

Mrs. NORWOOD. For manufacturing our initial estimate of employment was very accurate. Revisions occur because the data that we discuss with you are tabulated within 2 weeks of the reference period. At that time we do not have reports from all of the establishments in our sample in. We now have what we think is a pretty good estimate and in fact the size of the responses in April was historically fairly large.

The corrections, the upward revision has been in many of the individual service-producing industries, particularly in wholesale trade and in the services industry, itself. But the revisions have been relatively small. We're talking each month, as you know, about more than 110 million jobs in nonagricultural establishments and the change between the first closing that we reported to you and the later data is only about 100,000.

Representative HAMILTON. You conclude that you do not believe that April's two-tenths unemployment rate increase signals a change in the jobless situation. But even so, you do have a drop of

218,000 people employed, according to the household survey, and the number of people unemployed rose by 275,000.

Does that represent real job losses, or is it due to some kind of a factor that is temporary or not permanent?

Mrs. NORWOOD. Well, as we've discussed before, the rate of increase in the labor force has slowed considerably. That makes it much easier than before to have an unemployment rate that doesn't rise very fast.

Representative HAMILTON. This 1.2 percent annual labor force growth is fairly low?

Mrs. NORWOOD. That's slow.

Representative HAMILTON. According to the recent history, is that right?

Mrs. NORWOOD. Yes, that's right.

As I indicated in my statement, we're seeing increases in the unemployment rate for factory workers and for construction workers. And there are some parts of the country that are in trouble in large part because of the geographic concentration of industries along with their feeder industries. So if an industry in a particular part of the country tends to go down, it also affects its suppliers and then we see more unemployment there. Whereas, in some other industry, in some other area, there may be an increase in employment going on. We've had problems in the past in the southwest with oil producing economies, some of those are now diversified and we're not seeing as much difficulty there.

On the other hand, New England, which has had very low unemployment rates because of their high-tech development and the greater sophistication and training of their work force, now is beginning to experience some difficulties, and so the unemployment rates there are going up.

Representative HAMILTON. You mentioned the impact of the temporary census workers. Suppose you eliminate the Government jobs and just look at payroll job growth in the private sector, what does that tell you about the health of the private sector?

Mrs. NORWOOD. For the last 2 months, it shows the nonagricultural employment pretty flat, slightly negative but really it's not a statistically significant number. But it shows clearly that, without the census workers and government in general, that the private economy has not had much change at all. I'll leave it at that.

Representative HAMILTON. I want to take a look at inflation.

During these last 3 months, prices have risen 8.5 percent at an annual rate. That's the highest 3-month inflation rate since late 1981.

Are we now coming into a more persistent inflation problem?

Mrs. NORWOOD. For some time, now, we've been talking about rates of inflation over the year in the 4 to 5 percent range. The first quarter of this year saw a clear heating up, partly because of energy prices, partly because of food prices, and then also some of the indices without food and energy seemed to be up 1 point or 2 points from what they had been doing. That's partly because of apparel prices, where the introduction of new products generally are accompanied by an increase in prices. The introduction happened somewhat earlier this year than usual. And once having introduced

those prices over the next few months, it's not probable that price increases will continue.

Health care costs are continuing to rise. It's a serious problem, and has been over a considerable period of time. And they don't seem to be leveling off at all.

Representative HAMILTON. The gross national product fixed weight price index also rose 6.5 percent in the first quarter, compared to 3.6 percent in the fourth quarter.

Now, is the evidence developing here that inflation is accelerating? Is that a valid conclusion?

Mrs. NORWOOD. The first quarter of this year certainly shows an acceleration of inflation. The question is, are those permanent factors which will remain through the whole year, or not?

Representative HAMILTON. What do you think?

Mrs. NORWOOD. I guess that I would say that in apparel, it's fairly clear that we've had the bulge and it would be unusual if we continued to have apparel prices pushing up the index.

Food is often related to the weather, and it's hard to know what's going to happen.

Representative HAMILTON. Any impact of the OPEC agreement yesterday?

Mrs. NORWOOD. I don't know that, and I think I'd let Ken Dalton tell you a little bit about energy prices.

Representative HAMILTON. Can you tell anything about that?

Mr. DALTON. I would say, in direct response to your question, does the first quarter signal a persistent increase in inflation, that the answer would have to be, you can't tell. Because there are too many one-time factors going on. Energy prices, because of the cold weather in December, food prices because of the freeze in December.

Representative HAMILTON. It accelerated in the first quarter but you can't tell what the impact is down the road.

Mr. DALTON. Exactly. And I think those factors will have to play themselves out, first, before we can tell.

Mrs. NORWOOD. One point that I would like to make, Mr. Chairman——

Representative HAMILTON. The OPEC agreement doesn't strike you one way or the other at this point?

Mr. DALTON. Not at this point.

Mrs. NORWOOD. But I'd like to make one point, and that is, that quite apart from what happens over the rest of the year, we have had a surge of price increases in the first quarter of the year, and anything that happens after that is going to be built on top of that increase for the first quarter of the year. So that whatever happens, we're going to be factoring into the whole year, 3 months of higher prices, and people are going to be paying those prices.

Representative HAMILTON. Yes, that's the base.

Now, what about these figures compared to the unemployment figures? Do we have room to reduce the unemployment rate further without causing an acceleration of inflation? Or are we at the point where you can't get unemployment down anymore?

Mrs. NORWOOD. I don't really know. I don't think anybody really knows what the point is at which you have a noninflationary unemployment rate. What we're seeing clearly is a very high employ-

ment population ratio, much higher on average over a period of some months now than we have had before. I guess the way I would look at this question of the unemployment rate is not in the aggregate, but rather to take apart the pieces. We clearly have some areas of the country with much higher than average unemployment rates. And I would think that a great deal could be done there. Some of those are structural problems. But we're seeing regional differences in unemployment.

Representative HAMILTON. What I'm driving at here is to see if you see any relationship at all between the unemployment rate and the acceleration of inflation. Is there any connection between those two things?

Mrs. NORWOOD. I think we've seen an unemployment rate that has been very, very stable. We're seeing a real slowdown in employment growth so on both the employment and unemployment side a real stability or very slow growth.

As Ken Dalton said, the rise in inflation during the first quarter is really due to some special factors which may or may not be underlying factors that remain. It's not just some overall macro situation which has caused that first quarter inflation.

Representative HAMILTON. Are there any indications, as you look at indices like the employment cost index, which is rising, that we are at the start of a wage-price spiral?

Mrs. NORWOOD. There is evidence of some small upward push on wage costs. A large part of that push is coming from increased costs of fringe benefits with one of the most important culprits there being the increased costs to employers of health care.

Representative HAMILTON. But wages and salaries are also edging up.

Mrs. NORWOOD. Yes, but that's still fairly modest. And the first quarter's inflation figure appears to be largely related to things like energy prices, which are really externalities, food prices which have some different explanations, health care costs which are related to employment costs, and a little bit in housing and certainly a lot in apparel. But those are phenomena that go up and down a bit. So I don't see anything really there that relates to a wage-price spiral, yet.

Representative HAMILTON. When you talk about the increased costs of fringe benefits, in what part is that due to the rise in the Social Security tax?

Mrs. NORWOOD. Some of it is that.

Representative HAMILTON. A major part of it?

Mrs. NORWOOD. The two major culprits were health insurance costs and Social Security. I'd say that health insurance was a larger contributor than Social Security, but that's also there, very clearly. Again, that's a one-time kind of thing, for a while, anyway.

Representative HAMILTON. Wages and salaries—talking now more broadly about the earnings of workers—have not kept pace with inflation in the past year, that's correct, right?

Mrs. NORWOOD. Yes.

Representative HAMILTON. In a period of low unemployment and labor scarcity, you would normally think that real wages should increase, but that's not happening. What is the explanation, then, for the decline in real wages?

Mrs. NORWOOD. One of the things that we are seeing that you would expect in the kind of employment situation that we are currently in is that the relationships among the industries in average earnings is turning around. That is, in the service-producing sector, earnings are going up at a faster rate than in manufacturing, considerably faster in some areas. So you're seeing much more of a leveling off of earnings, as you would expect, given the demand supply situation.

Clearly, in the first quarter of this year there was a very high rate of inflation and so, when you look at real earnings, it's pretty hard to get something that's going to offset that 8.5 percent annual rate. So I think that we need to see how much that inflationary spiral continues.

As we've said, there are some indications that some of that may be due to special factors during that first quarter.

Representative HAMILTON. Your figures with respect to the usual weekly earnings of wage and salary workers suggest that the median earnings of the Nation's 84 million full-time wage and salary workers rose 4.5 percent during the past year. But they had a real decline of about 0.7 percent after inflation. That's correct, right?

Mrs. NORWOOD. I believe so.

Representative HAMILTON. Let me turn to particular population groups.

Again, referring to usual weekly earnings, the median earnings of women compared to men has risen gradually during the 1980's from 64 percent in 1980 to 71 percent in 1989. Is that because we have had more women coming into the higher paid occupations, or are women generally across the board earning more relatively to men?

Mrs. NORWOOD. Well, on average, women are clearly not earning more than men, but they are earning a higher proportion of the male salary than they did before. I believe that's because the women who are coming into the labor market are better qualified, and there's been a vast expansion, of course, in labor force participation of women. Many of the women working today have been in the labor force for a somewhat longer period. They're more experienced and they are now beginning to move up in the occupational structure.

Representative HAMILTON. Has there been any improvement in the earnings of blacks and Hispanics relative to whites in recent years?

Mrs. NORWOOD. Very little, as I recall. The situation there is very different.

Representative HAMILTON. The median earnings of blacks is 77 percent of the earnings of whites. For Hispanics, it's 73 percent, lower than blacks.

Mrs. NORWOOD. Yes. And of course, there's been a difference historically between the black women and the black men. But here I think you can see the differences in a way, when you look at the female labor force group. What you are beginning to see is the effect of education and training and stronger labor force attachment on their earnings.

In the case of minorities, we're still seeing quite clearly the lack of educational opportunity and the lack of training and experience that some black males have had. In the case of Hispanics, we have a much younger labor force and that, too, has an effect, because it means that they have less experience in the jobs that they're doing, and that's clearly related to remuneration.

Representative HAMILTON. Now, most of the 340,000 increase in working mothers in the past year occurred among mothers of preschoolers. Can you tell us what percentage of mothers with preschool children work?

Mrs. NORWOOD. It's well over half, and we can supply the exact figure for the record. I might add——

Representative HAMILTON. Now, do most of those mothers work full time or part time, or can your statistics tell?

Mrs. NORWOOD. Most women work full time. Obviously, a somewhat smaller proportion of those mothers with very young children work full time, but a significant proportion of them do. And I do want to point out that it's not just women of preschoolers, it's also women with children under the age of 1 year. There's been a phenomenal increase in the labor force participation of mothers with young children.

Representative HAMILTON. Do the figures show any slowing down in the growth of the number of working mothers, or is it still continuing upward?

Mrs. NORWOOD. It appears that the rate of increase may be slowing down.

Representative HAMILTON. Slowing down?

Mrs. NORWOOD. Yes. But that's partly because of the very high labor force participation.

Representative HAMILTON. Do you keep any figures at all on child care arrangements for preschool children?

Mrs. NORWOOD. Not specifically. We did a special survey a couple of years ago in which we looked at what kind of child care arrangements business establishments were providing. We found, of course, as we had expected, that a very small proportion of business establishments provided child care and that it was primarily the large business establishments that were doing that.

That situation seems to have improved somewhat. That is, there's been an increase, but it's still a rather small proportion.

Representative HAMILTON. Do you have any idea why the Census Bureau is having so much trouble getting answers to the census forms?

Mrs. NORWOOD. Yes, I do. Yes, I think so.

I think that there has been a very real difference in the attitude of people toward their government. We're seeing that when we try to go out and hire the brightest, most qualified young people to join BLS. And I think that we're seeing it in all survey work that the Federal statistical system is doing, and clearly the Census Bureau is finding that too.

Representative HAMILTON. A deterioration in the attitude?

Mrs. NORWOOD. A deterioration. Yes, of confidence in the Government, perhaps, and in attitudes toward the Government. If you look at the receipts by mail of the Census Bureau by individual State, you see exactly the same patterns now that we had in 1980.

The difference is that the response rate in 1980 was roughly 10 percent greater than today. So if you graph it the line is on top but it has the same up and down, depending upon the State.

So it's not what the Census Bureau has done, I think, that has caused this, because they've done some innovative things to increase response rates. I think it's just a basic issue of confidence in government.

Representative HAMILTON. Are you running into that in your statistical soundings?

Mrs. NORWOOD. Yes.

Representative HAMILTON. You run into the same thing?

Mrs. NORWOOD. Yes, we are. What we've found is that we still get very high response rates, but we're finding that it is much more of a selling job than it used to be. And we are having to put more of our resources into working with reporters to explain to them how important this is and how they, themselves, can use the data.

Representative HAMILTON. Are the problems that the Census Bureau is having going to spill over to you? If they have problems with their data, that affects you, doesn't it, in some ways?

Mrs. NORWOOD. The most important problem that will spill over is that if the Census Bureau is not able to get a really full count of the people in the census, then the data which form the base for the estimation of the population over the next decade will not be as good as it ought to be. And it is those population counts which are used in the design of every one of the household surveys in this country. So the whole statistical system really benefits from a good census and a complete census.

And we feel very strongly that it is very important that there be adequate support for convincing people that they should reply to the census.

Representative HAMILTON. An article you wrote, Mr. Plewes, on the labor force data in the next century, indicates that BLS is going to expand the size of its survey in order to compute unemployment rates for all the States. Today, you just do it with 11 States, is that correct?

Mr. PLEWES. Eleven States are estimated directly from the survey on a monthly basis.

Representative HAMILTON. So how much do you plan to expand, how many additional households, how many other States?

Mr. PLEWES. This would occur some time in the future. We're looking to introduce the redesign toward the late 1990's. After we do a basic redesign of the current population survey, we're estimating that it'll require at least a doubling of the size of the current population survey, not a doubling of the base cost but a doubling of the size of the survey to produce estimates for all States with the same degree of reliability that we now have for the 11 larger States on a monthly basis.

Representative HAMILTON. You just survey the 11 largest States, is that it, today?

Mr. PLEWES. No, we survey all the States but out of the process, we get reliable enough data to publish on a monthly basis for the 11 largest States only.

Representative HAMILTON. And that reflects the whole country?

Mr. PLEWES. Yes, sir, the State data is a byproduct of the overall collection. Data from all States go into the national estimates.

Representative HAMILTON. I see.

Are you going to expand your coverage with respect to minorities?

Mr. PLEWES. In part, because of some of the other things we're doing, data for minorities should improve, but this particular objective of the redesign was to improve estimates for the States.

Mrs. NORWOOD. All that, of course, is dependent upon budget levels over the next decade.

Representative HAMILTON. Yes.

You were in Poland recently, weren't you? Who was in Poland, both of you?

Mrs. NORWOOD. Both Tom Plewes and Ken Dalton were in Warsaw and I've just returned a week ago from Moscow and Leningrad.

Representative HAMILTON. How are their statistics?

Mrs. NORWOOD. I think they have very good intentions. I think they have a very long way to go. And I think that both countries clearly are showing the effects of a centralized government approach to things. You want something, you ask for it. Never do a sample survey if you can get a whole census.

Representative HAMILTON. Would it be fair to say that the statistics now coming out of the Polish Government are accurate?

Mrs. NORWOOD. I think that all those countries are moving toward a more objective system than they have had before. But they're not quite there yet, and the accuracy depends upon the particular series.

Mr. Plewes can, for example, tell you a little bit more about the unemployment estimates from Poland, which are being discussed——

Representative HAMILTON. What about the major economic indices that we look at? Politicians look at the unemployment rate, inflation rate, GNP, those kinds of things. Are they accurate in Poland?

Mr. PLEWES. GNP is largely based, of course, in this country on a current basis on our estimates of employment and so they're tied in together. Their estimates of employment are very good for what used to be the state-owned sector of the economy, timely and very accurate. They're nonexistent for the growing private sector of the economy right now. And so anyone who gives you an estimate of total employment is only taking a guess as to the amount of activity in the private sector, which is growing, combined with the state-owned sector, where employment is going down.

They don't measure unemployment the way we do; they have no household survey; they only measure registrations. But, a large number of the registered persons are still employed, but are looking to better themselves.

Representative HAMILTON. Registration? You mean, if you're unemployed in those countries, you have to register?

Mr. PLEWES. Basically, people register to get certain benefits only available if they do register. It's not like we ask people what their activities are.

Representative HAMILTON. How about the Soviet Union. Are its major indices accurate today?

Mrs. NORWOOD. Well, of course, they have no data on unemployment, they have no concept of unemployment. And in fact, the entire 10 days I was there, I was the only one who talked about unemployment measures and productivity measures. The price situation is very different from ours. There are numerous shortages in the economy. They are trying to develop in the Soviet Union a consumer price index but they are a long way, and they recognize that they're a long way from having done it.

I think Ken Dalton found a little different situation in Warsaw, and he might want to comment on that.

Mr. DALTON. I believe that the retail price index that the central statistical office puts out probably is accurate.

Representative HAMILTON. In Warsaw?

Mr. DALTON. In Warsaw. Especially since they decontrolled all of the prices and removed subsidies. But they have a lot of work to do to adapt to the economy that is changing very rapidly right in front of them. And whether they can keep up with that or not, I don't know.

Mrs. NORWOOD. I might point out that in terms of the Soviet Union, they still have a controlled economy. Many of the economists and statisticians that I talked with, talked about a move to less controlled economy. But I do have to tell you that I also met with the chairman of the commission which sets all the prices in the economy. And I did not——

Representative HAMILTON. He's a pretty busy fellow, isn't he?

Mrs. NORWOOD. Well, he had stacks of pieces of paper and I did not have the feeling that he thought that he was going to be out of a job very quickly. But I don't——

Representative HAMILTON. They don't have any way of measuring productivity in the Soviet Union? Do they know whether their productivity is going up or down or sideways?

Mrs. NORWOOD. I don't think so. I think that first of all, they have output measures which come from the Government-owned sector. They are based in large part, still, on what the Government plan was. And it is to the advantage of a business enterprise to show that it has met that plan. So there are quality control problems there.

Representative HAMILTON. When you see figures in the press that the Soviet economy is half the size of the United States—or whatever the fraction is—do you put any credence in that, or is that just kind of a roundhouse guess?

Mrs. NORWOOD. I think that it's using whatever pieces of data they have, trying to assess their validity. It is certainly not a data system that is in any way comparable to ours. One has a very definite impression of a great deal of underemployment, of people who are really not working a full day. I did visit——

Representative HAMILTON. Where do those figures come from, anyway?

Mrs. NORWOOD. Well, the figures on output come from government-owned enterprises which are reported to the statistical system. And they are very real figures. You can argue, if you wish, that by asking them first what the planned output for the enter-

prise was, and then having another column about what their enterprise produced, that there might be some problem. We would not ask questions in that way. So you have that kind of problem.

In terms of price, which is a tremendously important part of any productivity measure or any measure of the value of the output of the economy, you have to have a deflator. They're a long way from having data that are useful.

Representative HAMILTON. What I'm trying to get is kind of a general impression from you.

When I read that the Soviet economy is 50 percent of the U.S. economy, if that's the fraction, can I put any reliance on that figure or not? Is that just a guess?

Mrs. NORWOOD. I think it's a better figure than the ones we were reading previously which said that the Soviet economy was very, very large.

Representative HAMILTON. You think they're improving?

Mrs. NORWOOD. They're improving? I'm not sure. The economy is one thing. I don't see that that's improving at this point. In terms of the data system, I think they have at the head of their system, an economist who had been critical of the statistical system before.

Representative HAMILTON. Trying to improve it?

Mrs. NORWOOD. Who seems to understand, and in fact, he will be visiting us and I hope that we'll have an opportunity to have you talk with him about the need for objective data.

Representative HAMILTON. Thank you very much.

Mrs. NORWOOD. Thank you.

Representative HAMILTON. The committee will stand adjourned.

[Whereupon, at 10:32 a.m., the committee adjourned, subject to the call of the Chair.]

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